

# Bird of El Rahad Abu Dakana City, North Kordofan State, Sudan.

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## Abstract:

One hundred and fifty-six species of birds belonging to 38 families and 10 orders were recorded at El Rahad area during 2014-2016. The listed birds represented about 23.9 “%” of the 653 bird species in the Sudan. The resident, African migrants and Palearctic migrant’s species were 109 (69.9%), 19(12.2%) and 28 (17.9%), respectively. The total number of birds is about 20304. The non-passerines species were 60 species and the passerines were 96 species. The order Passeriformes was the largest including 21 families and 96 species. Fifty-one species were recorded breeding during the study period e.g., all species of Weavers and Sparrows and Doves. According to IUCN Red List, one species recorded Endangered (*Polemaetus bellicosus*), one species recorded as Near Threatened, two species were Vulnerable while most species were categorized under the Least Concerned. The possibility of recording more species was discussed.

**Keywords:** Birds, Identification, Status, Observations, El Rahad Abu Dakana.

طيور مدينة الرهد أبودكنة - ولاية شمال كردفان- السودان.  
أ.سناء الطيب أحمد آدم- محاضر - قسم علم الحيوان- كلية العلوم- جامعة كردفان  
المستخلص:

مائة وستة و خمسون نوع من الطيور منتمية الي ثمانية وثلاثون عائلة وعشرة رتبة تم تسجيلها في منطقة الرهد أبودكنة أثناء الفترة ما بين 2014-2016م. قائمة الأنواع التي سجلت تمثل حوالي 23.9% من 635 نوع من أنواع طيور السودان. اعداد الأنواع المستوطنة و الأنواع المهاجرة الإفريقية والأنواع المهاجرة الاوروبية هي 109 نوع تمثل حوالي (69.9%) و 19 نوع (12.2%) و 28 نوع (17.9%) من الأنواع التي تم تسجيلها علي التوالي. العدد الكلي لأنواع الطيور التي سجلت حوالي 20304 نوع. الأنواع المنتمية لرتبة العصفوريات حوالي 96 نوع و الأنواع غير العصفورية حوالي 60 نوع. رتبة العصفوريات تمثل اكبر الرتب التي سجلت باحتوائها علي 21 عائلة و 96 نوع من الطيور التي تم رصدها في منطقة الدراسة. واحد و خمسون نوع من الطيور وجدت متوالدة في أثناء فترة الدراسة وهي تشمل كل أنواع العصافير و النساج و القماري. وفقا للقائمة الحمراء للأنواع المهددة بالانقراض عالميا سجل نوع واحد مهدد بالانقراض هو العقاب المقاتل ونوع واحد تحت التهديد وهو الباز الابيض(الصقر الابيض), ايضا سجل نوعان كمعرضة للانقرض وهي القمري الاوروي و العويسق الأحمر , في حين صنفت بقية الأنواع بانها غير معرضة للتهديد او مستقرة. إمكانية تسجيل أنواع اخري في منطقة الرهد تمت مناقشتها.

## 1. Introduction:

Birds the master of air, are the most prominent and widespread species of terrestrial and aquatic vertebrate fauna and occupy most of the global environments (1), (2). They are so well studied because they are much more visible to people every day in streets and gardens and are aesthetically more attractive than many other animals (3). They form vital parts of food chains and food webs in ecosystems in addition to their important role as potential pollinators and bio-indicators (4). Frugivorous birds are good seed dispersal agents among vertebrates (5). The abundance of bird population has been found to change considerably due to anthropogenic activities (6), (7), (8).

The avian fauna of Sudan includes 653 species of birds Locally; many scientific studies were recorded and published of bird fauna. Of these are bird fauna of Hantub (9); Dinder National Park (10) and (11); Khartoum (12); El Ga'ab Depression (13), Alsalam and Abyei–Muglad (14) Shendi area (15) and Jabel El Dayer Na-

tional Park (16). A lot of studies in different countries have been carried out on bird fauna. Examples included the counties of India (17), Turkey (18), Jordan (19), Tunisia (20) and Palestine (21), (22).

Only patchy information is available on the avian fauna of the El Rahad city due to Cave and Macdonald (23) and (24). The study of the area has become basic necessity. The aims of the study focus mainly on the identification of the bird's fauna, changes and quantification of these changes.

## **2. Material and Methods:**

### **2.1 The Study Area:**

The study area, located on the southern part of northern Kordofan State, it lies in ( $12^{\circ} 43' N$  and  $30^{\circ}39'E$ ), with an elevation of 490m above sea level. ElRahad Abu Dakana is characterized by tropical climate, which is hot in summer and mild in winter. The average temperatures ranged from  $36^{\circ}C$  in summer to  $19^{\circ}C$  in winter. The average annual rainfall is 67 mm (25). Main marked in ElRahad Abu Dakana is Turdat ElRahad, it represents the greatest area of water gathered in north Kordofan State, it is fed by seasonal streams and khors and A branch of khor Abu Habil, the city located on the eastern bank of it, Turdat ElRahad is valuable resources of drinking water for the ElRahad Town and villages around it. It is surrounded by fruit gardens, orchards, vegetables farms and Elregalh Gardener Project from western bank (26) and (25) and (Fig.1,2,3). Human activities include vegetables growing e.g. Okra, Tomatoes, pumpkin, cucumber, Ajour, pepper, paprika, melons, onion and others. Due to water availability and fertility of soil there are wide variety of vegetation's such as trees, shrubs and grasses and aquatic plants.



**Fig .1: Study area, ElRahad town**  
Modified from ([Http://www.google.com/earth/](http://www.google.com/earth/)).



**Fig .2:El Rahad Abu Dakana Town.**



**Fig .3: Fruit gardens and vegetables farms.**

## 2.2 Methods:

The investigation was carried out between February- December 2014 and August (2015)- April 2016. The study area was reached by car and boats and patrolled on foot. The study covered both dry and wet seasons. Observations started at 7:00 Am to 7:00 Pm. However, many visits were carried out in earlier hours and extend-

ed to later hours for monitoring some nocturnal species. The birds were recognized directly and facilitated by using a Pentax binocular (12x50, 5.500). Documentation was made by a Nikon digital camera of the type DX (AF-SNIKKOR 18-55mm 1:3.5-5.6GVR) and Canon digital camera. Classification and valid species name followed (27). Identifications followed (28), (29) and (27). Data on breeding activities and nesting habits were collected. In this study the number of individuals were recorded (Direct count in 2016) and percentage of each variable was calculated. In spite of all these some species might had been missed, in view of difficult access, hiding or shyness of some species.

### 3. Results:

The bird species recorded in both seasons in ElRahad Abu Dakana were given in Table (1) that there were marked seasonal changes in species of birds inhabiting the study area. Their status information followed (30). and their categorization was based on (31) A total of 156 species, 38 families and 10 orders of bird's species were recorded from ElRahad Abu Dakana Table (I). The total numbers of individuals observed were 20304. Among of them 109 (69.9%) were resident, 19 (12.2%) were African migrants, 28 (17.9%) were Palearctic migrants. Fifty-one species were recorded breeding during the study period e.g. *Turtur abyssinicus*, *Streptopelia senegalensis*, *Cypsiurus parvus*, *Ploceus taeniopterus* and *Sporopipes frontalis* (Fig,4). The *Milvus migrans*, *Corvus albus* were very common near the abattoir (Fig,5). Species of Falconiformes were seen in different parts in the study area (Fig, 6). Members of Doves and Weavers were very common near human activities (- Fig,7). The *Upupa epops*, *Lanius senator* and *Oenanthe hispanica* were associated with vegetables farms and agricultural fields (Fig, 9). while *Lybius vieilloti*, *Urocolius macrourus* and *Pycnonotus tricolor* were common in Fruit gardens. Orders Pteroclitiformes and Strigiformes were represented by one species only (Fig, 8). When Passeriformes has highly diverse and abundant with 21 families and 96 species (Fig,10,11).

**Table (1): Birds of El Rahad Abu Dakana, with their numbers observed from August (2015)- April 2016, status and IUCN red list Categorization (RLC).**

Common name	Scientific name	Number observed in 2015/2016	ST	RLC
Order: Falconiformes 1-Family: Pandionidae				
Osprey	<i>Pandion haliaetus</i>	16	PW	LC
Order: Falconiformes 2-Family: Accipiteridae				
Black Kite	<i>Milvus migrans</i>	294	MB/ PW	LC
Short-toed Snake-Eagle	<i>Circaetus gallicus</i>	2	MB/ PW	LC
Brown Snake-Eagle	<i>Circaetus cinereus</i>	4	RB	LC
Pallid Harrier	<i>Circus macrourus</i>	19	PW	NT
Eurasian Marsh Harrier	<i>Circus aeruginosus</i>	89	PW	LC
African Marsh Harrier	<i>Circus ranivorus</i>	10	RM	LC
Dark Chanting-Goshawk	<i>Melierax metabates</i>	32	RB	LC
Gabar Goshawk	<i>Micronisus gabar</i>	2	RB	LC
Little Sparrow Hawk	<i>Accipiter minullus</i>	11	R	LC
Great Sparrow Hawk	<i>Accipiter melano-leucus</i>	1	R	LC
lizard Buz-zard	<i>Kaupifalco monogrammicus</i>	36	RB	LC
Long-legged Buzzard	<i>Buteo rufinus</i>	3	R/ PW	LC
Martial Eagle	<i>Polemaetus belliosus</i>	4	RB	EN

Common name	Scientific name	Number observed in 2015/2016	ST	RLC
Order: Falconiformes3-Family: Falconidae				
Eurasian Kestrel	<i>Falco tinnunculus</i>	6	RB/PW	LC
Lesser Kestrel	<i>Falco naumanni</i>	4	P	LC
Grey Kestrel	<i>Falco ardosiacus</i>	8	RB	LC
Barbary Falcon	<i>Falco pelegrinoides</i>	1	PW	LC
Peregrine Falcon	<i>Falco peregrinus</i>	1	RB/P	LC
Red-footed Falcon	<i>Falco vespertinus</i>	15	P	VU
Order: Pterocliiformes - Family: Pteroclididae				
Chestnut-bellied Sandgrouse	<i>Pterocles exustus</i>	6	RB	LC
Family: Columbidae -		Order: Columbiformes		
Speckled Pigeon	<i>Columba guinea</i>	677	RB	LC
Eurasian Turtle Dove	<i>Streptopelia turtur</i>	554	PW	VU
African Collared Dove	<i>Streptopelia roseogrisea</i>	410	RB	LC
African Mourning Dove	<i>Streptopelia decipiens</i>	1033	RB	LC
Red-eyed Dove	<i>Streptopelia semitorquata</i>	328	RB	LC
Ring-necked Dove	<i>Streptopelia capicola</i>	406	R	LC
Vinaceous Dove	<i>Streptopelia vinacea</i>	20	RB	LC
Laughing Dove	<i>Streptopelia senegalensis</i>	1194	RB	LC

Common name	Scientific name	Number observed in 2015/2016	ST	RLC
Namaqua *Dove	<i>Oena capensis</i>	973	MB	LC
Black-billed * Wood Dove	<i>Turtur abyssinicus</i>	141	RB	LC
Order: Cuculiformes - Family: Cuculidae				
African Cuckoo	<i>Cuculus gularis</i>	8	MB	LC
Pied Cuckoo	<i>Clamator jacobinus</i>	2	M	LC
Senegal Coucal	<i>Centropus senegalensis</i>	9	RB	LC
White-browed Coucal	<i>Centropus superciliosus</i>	12	RB	LC
Order: Strigiformes - Family: Strigidae				
African Marsh Owl	<i>Asio capensis</i>	7	M	LC
Order: Caprimulgiformes - Family: Caprimulgidae				
Long-tailed *Nightjar	<i>Caprimulgus climacurus</i>	14	MB	LC
Order: Apodiformes 1- Family: Apodidae				
Scarce Swift	<i>Schoutedenapus myoptilus</i>	14	M	LC
African Palm- * Swift	<i>Cypsiurus parvus</i>	270	RB	LC
Common Swift	<i>Apus apus</i>	92	P	LC
*Little Swift	<i>Apus affinis</i>	48	RB	LC
*Horus Swift	<i>Apus horus</i>	71	RB	LC
Order: Apodiformes 2- Family: Collidae				
Speckled Mouse bird	<i>Colius striatus</i>	20	RB	LC
Blue-naped *Mousebird	<i>Urocolius macrourus</i>	171	RB	LC



Common name	Scientific name	Number observed in 2015/2016	ST	RLC
Order: Coreciiformes 1- Family: Alcedinidae				
Grey-headed Kingfisher	<i>Halcyon leucocephala</i>	17	MB	LC
Order: Coreciiformes 2- Family: Meropidae				
Little Bee-eater	<i>Merops pusillus</i>	384	RB	LC
Little Green *Bee-eater	<i>Merops orientalis</i>	14	RB	LC
White-throated *Bee-eater	<i>Merops albicollis</i>	66	MB	LC
Blue-cheeked Bee-eater	<i>Merops persicus</i>	30	MB/PW	LC
European Bee-eater	<i>Merops apiaster</i>	18	P	LC
Northern Carmine Bee-eater	<i>Merops nubicus</i>	18	MB	LC
Order: Coreciiformes 3- Family: Coraciidae				
European Roller	<i>Coracias garrulous</i>	2	P	LC
Abyssinian *Roller	<i>Coracias abyssinica</i>	58	MB	LC
Order: Coreciiformes 4- Family: Bucerotidae				
African Grey Hornbill	<i>Tockus nasutus</i>	26	RB	LC
Red-billed Hornbill	<i>Tockus erythrorhynchus</i>	10	RB	LC
Order: Coreciiformes 5- Family: Upupidae				
African Hoopoe	<i>Upupa Africana</i>	12	M	LC
Eurasian Hoopoe	<i>Upupa epops</i>	41	RB/PW	LC
Order: Coreciiformes 6- Family: Phoeniculidae				

Common name	Scientific name	Number observed in 2015/2016	ST	RLC
Green Wood hoopoe	<i>Phoeniculus purpureus</i>	6	RB	LC
Order: Piciformes - Family: Capitonidae				
Vieillot's Barbet	<i>Lybius vieilloti</i>	63	RB	LC
Yellow-breasted Barbet	<i>Trachyphonus margaritatus</i>	10	RB	LC
Order: Passeriformes 1- Family: Alaudidae				
Singing Bush lark	<i>Mirafraga cantillans</i>	8	RB	LC
Greater Short-toed Lark	<i>Calandrella brachydactyla</i>	10	PW	LC
Crested Lark	<i>Galerida cristata</i>	14	RB	LC
Chestnut-backed Sparrow-Lark	<i>Eremopterix leucotis</i>	14	RB	LC
Order: Passeriformes 2-Family: Hirundinidae				
Ethiopian Swallow	<i>Hirundo aethiopica</i>	258	RB	LC
Wire-tailed Swallow	<i>Hirundo smithii</i>	80	RB	LC
Barn Swallow	<i>Hirundo rustica</i>	21	P	LC
Order: Passeriformes 3-Family: Motacillidae				
African Pied Wagtail	<i>Motacilla aguimp</i>	20	R	LC
White Wagtail	<i>Motacilla alba</i>	380	PW	LC
Tawny Pipit	<i>Anthus campestris</i>	30	PW	LC
African Pipit	<i>Anthus cinnameus</i>	32	R	LC
Order: Passeriformes 4-Family: Pycnonotidae				

Common name	Scientific name	Number observed in 2015/2016	ST	RLC
Common Bul- *bul	<i>Pycnonotus bar- batus</i>	626	RB	LC
Yellow-vented *Bulbul	<i>Pycnonotus tri- color</i>	58	RB	LC
Order: Passeriformes 5-Family: Turdidae				
Common Red- start	<i>Phoenicurus phoenicurus</i>	18	PW	LC
Familiar Chat	<i>Cercomela famil- iaris</i>	19	R	LC
Black-tailed Chat	<i>Cercomela melanura</i>	28	RB	LC
Rufous-tailed Scrub Robin	<i>Cercotrichas ga- lactotes</i>	10	RB/ PW	LC
Black Scrub *Robin	<i>Cercotrichas podobe</i>	215	RB	LC
Northern Wheatear	<i>Oenanthe oenan- the</i>	78	PW	LC
Isabelline Wheatear	<i>Oenanthe isabel- lina</i>	30	PW	LC
Pied Wheatear	<i>Oenanthe pleschanka</i>	31	PW	LC
Black-eared Wheatear	<i>Oenanthe hispan- ica</i>	3	PW	LC
Desert Wheatear	<i>Oenanthe deserti</i>	7	PW	LC
Order: Passeriformes 6-Family: Sylviidae				
Eastern Oliva- ceous Warbler	<i>Hippolais pallida</i>	20	RB/ PW	LC
African Reed-Warbler	<i>Acrocephalus baeticatus</i>	10	MB	LC
Eurasian Reed-Warbler	<i>Acrocephalus scirpaceus</i>	12	PW/ MB	LC
Order: Passeriformes 7- Family: Cisticolidae				

Common name	Scientific name	Number observed in 2015/2016	ST	RLC
Croaking Cisticola	<i>Cisticola natalensis</i>	18	R	LC
Red-pate Cisticola	<i>Cisticola ruficeps</i>	18	RB	LC
Zitting Cisticola	<i>Cisticola juncidis</i>	14	RB	LC
Desert Cisticola	<i>Cisticola aridulus</i>	12	RB	LC
Tawny-flanked Prinia	<i>Prinia subflava</i>	102	RB	LC
Red-fronted Apalis	<i>Apalis rufifrons</i>	2	R	LC
Green-backed Camaroptera	<i>Camaroptera brachyura</i>	70	RB	LC
Order: Passeriformes 8- Family: Muscicapidae				
Pale Flycatcher	<i>Bradornis pallidus</i>	26	RB	LC
Spotted Flycatcher	<i>Muscicapa striata</i>	26	P	LC
Order: Passeriformes 9- Family: Monarchidae				
African Paradise-Flycatcher	<i>Terpsiphone viridis</i>	2	MB	LC
Order: Passeriformes 10- Family: Remizidae				
Sennar Penduline-Tit	<i>Anthoscopus punctifrons</i>	20	RB	LC
Mouse-colored Penduline-Tit	<i>Anthoscopus musculus</i>	16	RB	LC
Order: Passeriformes 11- Family: Nectariniidae				
Scarlet-chested Sunbird	<i>Chalcomitra senegalensis</i>	41	RB	LC
Beautiful Sunbird	<i>Cinnyris pulchellus</i>	220	RB	LC

Common name	Scientific name	Number observed in 2015/2016	ST	RLC
Variable Sun-bird	<i>Cinnyris venustus</i>	6	RB	LC
Copper Sunbird	<i>Cinnyris cupreus</i>	22	RB	LC
Pygmy Sun-bird	<i>Hedydipna platura</i>	46	RB	LC
Nile Valley Sun-bird	<i>Hedydipna metallica</i>	16	RB	LC
Order: Passeriformes 12- Family: Laniidae				
Grey-backed Fiscal	<i>Lanius excubitoroides</i>	115	RB	LC
Great Grey Shrike	<i>Lanius excubitor</i>	32	R	LC
Lesser Grey Shrike	<i>Lanius minor</i>	39	P	LC
Masked Shrike	<i>Lanius nubicus</i>	40	PW	LC
Woodchat Shrike	<i>Lanius senator</i>	19	PW	LC
Red-backed Shrike	<i>Lanius collurio</i>	14	P	LC
Rufous-tailed Shrike	<i>Lanius isabellinus</i>	14	PW	LC
Order: Passeriformes 13- Family: Malaconotidae				
Black-crowned Tchagra	<i>Tchagra senegala</i>	88	RB	LC
Black-headed Gonolek	<i>Laniarius erythrogaster</i>	6	RB	LC
Sulphur-breasted Bush shrike	<i>Telophorus sulfurepectus</i>	1	M	LC
Order: Passeriformes 14- Family: Dicruridae				
Fork-tailed Drongo	<i>Dicrurus adsimilis</i>	6	RB	LC
Order: Passeriformes 15- Family: Corvidae				

Common name	Scientific name	Number observed in 2015/2016	ST	RLC
Piapiac	<i>Ptilostomus afer</i>	11	RB	LC
Cape Crow	<i>Corvus capensis</i>	4	RB	LC
*Pied Crow	<i>Corvus albus</i>	225	RB	LC
Order: Passeriformes 16- Family: Oriolidae				
Eurasian Golden Oriole	<i>Oriolus oriolus</i>	6	P	LC
Order: Passeriformes 17- Family: Sturnidae				
Greater Blue-eared Glossy-Starling	<i>Lamprotornis chalybaeus</i>	28	RB	LC
Lesser Blue-eared Glossy-Starling	<i>Lamprotornis chloropterus</i>	726	M	LC
Purple Glossy-Starling	<i>Lamprotornis purpureus</i>	6	RB	LC
Chestnut-bellied *Starling	<i>Lamprotornis pulcher</i>	96	RB	LC
Order: Passeriformes 18- Family: Passeridae				
*House Sparrow	<i>Passer domesticus</i>	276	RB	LC
Kordofan Rufous Sparrow	<i>Passer kordofanicus</i>	1117	R	LC
Chestnut Sparrow	<i>Passer eminibey</i>	38	RB	LC
Sudan Golden-Sparrow	<i>Passer luteus</i>	1701	RB	LC
Desert Sparrow	<i>Passer simplex</i>	6	RB	LC
Yellow-spotted Petronia	<i>Petronia pyrgita</i>	20	R	LC
Bush Petronia	<i>Petronia dentate</i>	6	RB	LC
Order: Passeriformes 19- Family: Ploceidae				

Common name	Scientific name	Number observed in 2015/2016	ST	RLC
White-billed Buffalo-Weaver*	<i>Bubalornis albirostris</i>	42	RB	LC
Grey-headed Social-Weaver	<i>Pseudonigrita arnaudi</i>	14	RB	LC
Speckle-fronted *Weaver	<i>Sporopipes frontalis</i>	28	RB	LC
*Little Weaver	<i>Ploceus luteolus</i>	98	RB	LC
Lesser Masked-Weaver*	<i>Ploceus intermedius</i>	468	RB	LC
Northern Masked-Weaver*	<i>Ploceus taeniopterus</i>	1329	RB	LC
Vitelline Masked-Weaver*	<i>Ploceus vitellinus</i>	484	RB	LC
*Village Weaver	<i>Ploceus cucullatus</i>	123	RB	LC
Speke's Weaver*	<i>Ploceus spekei</i>	20	RB	LC
Cinnamon Weaver	<i>Ploceus badius</i>	32	RB	LC
Red-billed Qulea	<i>Quelea quelea</i>	14	MB	LC
Northern Red *Bishop	<i>Euplectes franciscanus</i>	532	RB	LC
Order: Passeriformes 20- Family: Estrildidae				
Green-winged *Pytilia	<i>Pytilia melba</i>	12	RB	LC
Green-backed Twin spot	<i>Mandingoa nitidula</i>	4	R	LC

Common name	Scientific name	Number observed in 2015/2016	ST	RLC
Red-billed Fire*finch	<i>Lagonosticta senegala</i>	600	RB	LC
Black-faced Firefinch	<i>Lagonosticta larvata</i>	24	RB	LC
Cut-throat *Finch	<i>Amadina fasciata</i>	18	RB	LC
Red-cheeked *Cordonbleu	<i>Uraeginthus bengalus</i>	348	RB	LC
Common Wax-bill	<i>Estrilda astrild</i>	56	R	LC
Black-rumped Waxbill	<i>Estrilda troglodytes</i>	234	RB	LC
Fawn-breasted Waxbill	<i>Estrilda paludicola</i>	10	RB	LC
Crim-son-rumped Waxbill	<i>Estrilda rhodopyga</i>	6	R	LC
African Silver*bill	<i>Euodice cantans</i>	525	RB	LC
Order: Passeriformes 21- Family: Viduidae				
Green Indigo bird	<i>Vidua nigeriae</i>	20	R	LC
Purple Indigo bird	<i>Vidua chalybeate</i>	93	RB	LC
Sudan Broad-tailed Whydah	<i>Vidua orientalis</i>	8	RB	LC
<b>Total number observed=20264</b>				

Key to status: B=Breeding record confirmed; M=Migrant including on passage through Sudan; P=Breed in Palearctic; R=Resident; W=Winters in Sudan.

\*breeding species in the area.

1. "152" bird species as Least Concerned (LC). This comprised





**Fig.4:** African Palm-Swift *Cypsiurus parvus*, and Northern Masked-Weaver *Ploceus teneoptyerus*.

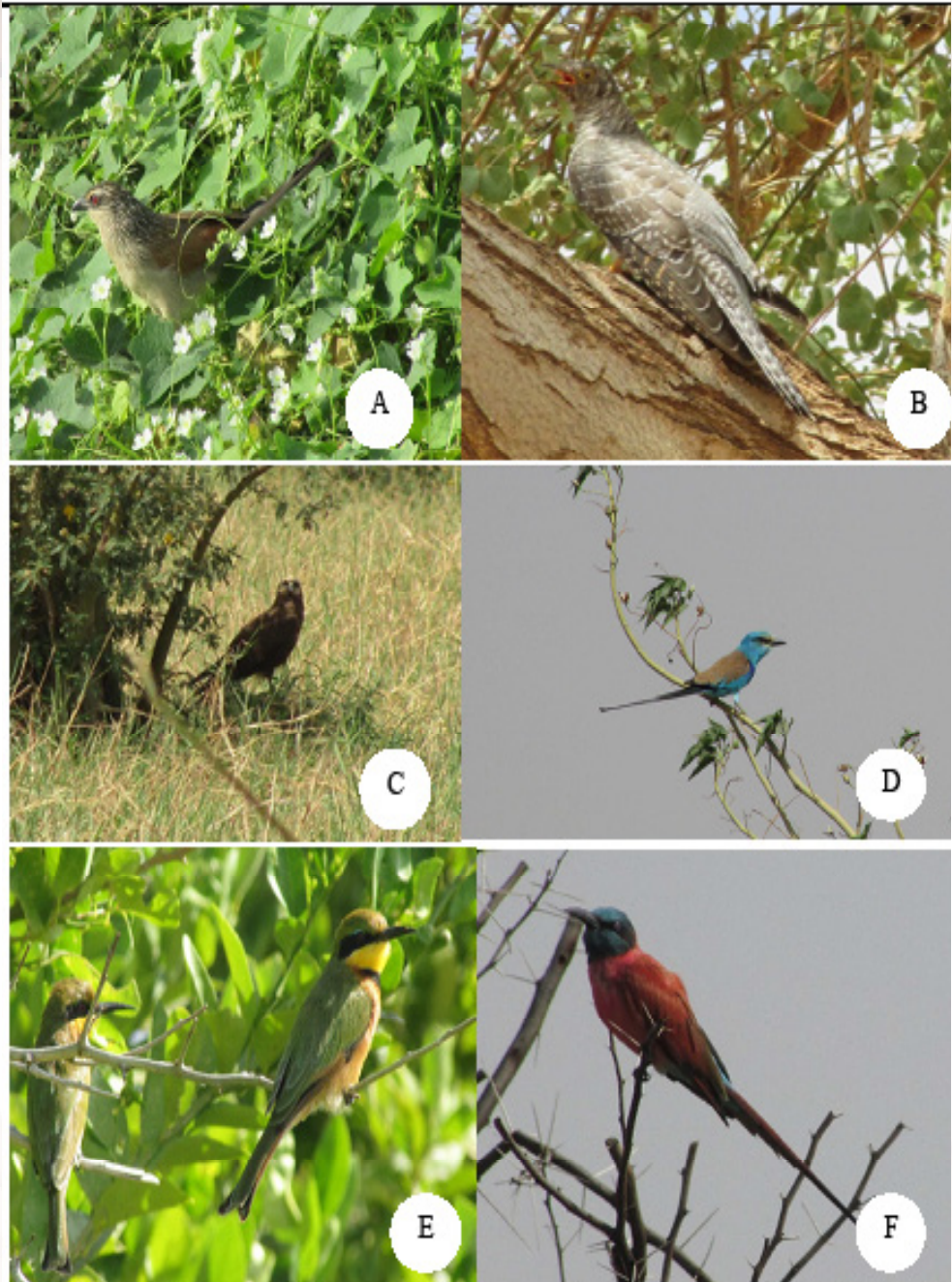


**Fig.5:** Black Kite *Mitvus migrans*, and Pied Crow *Corvus albus*.

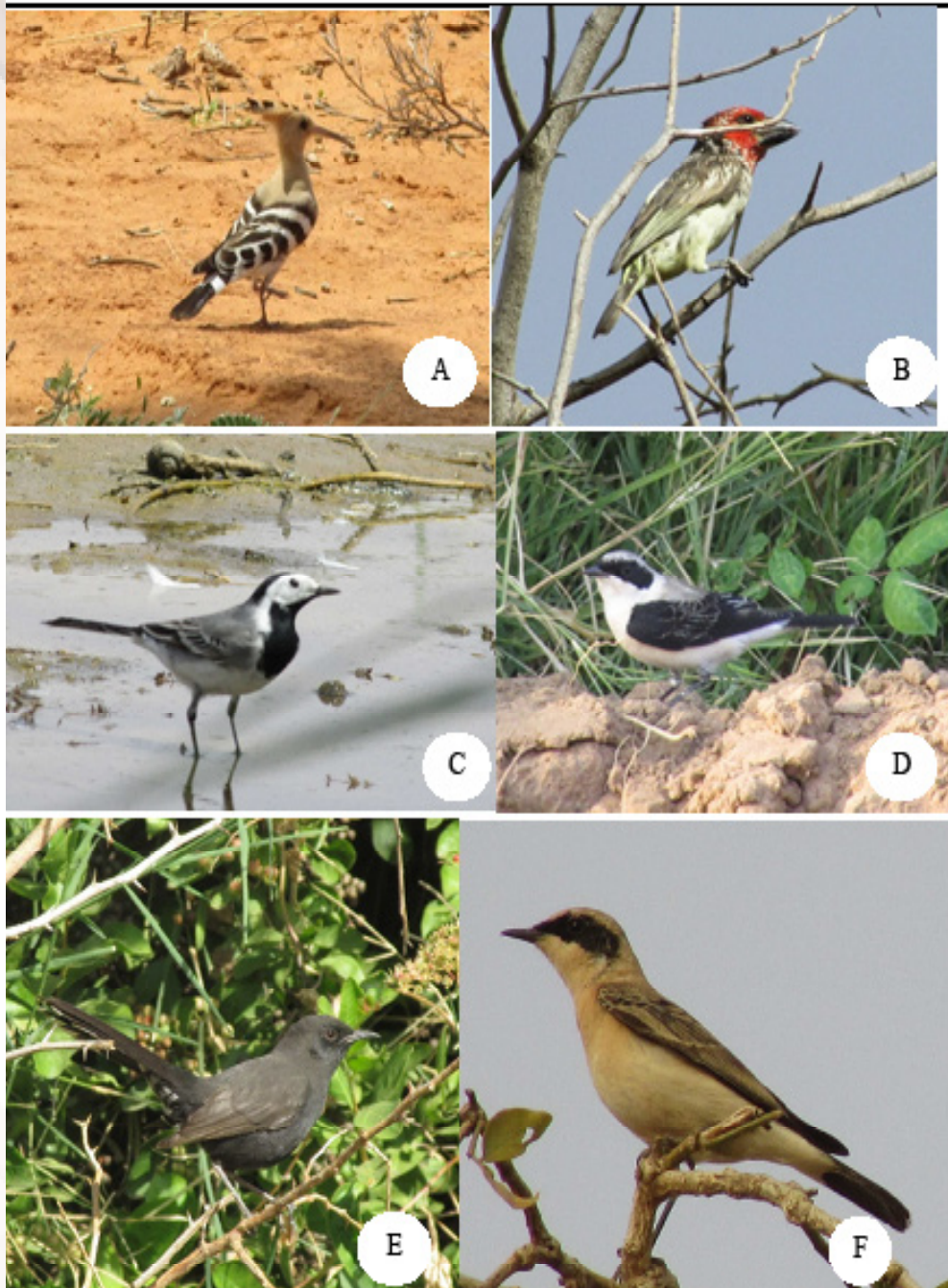




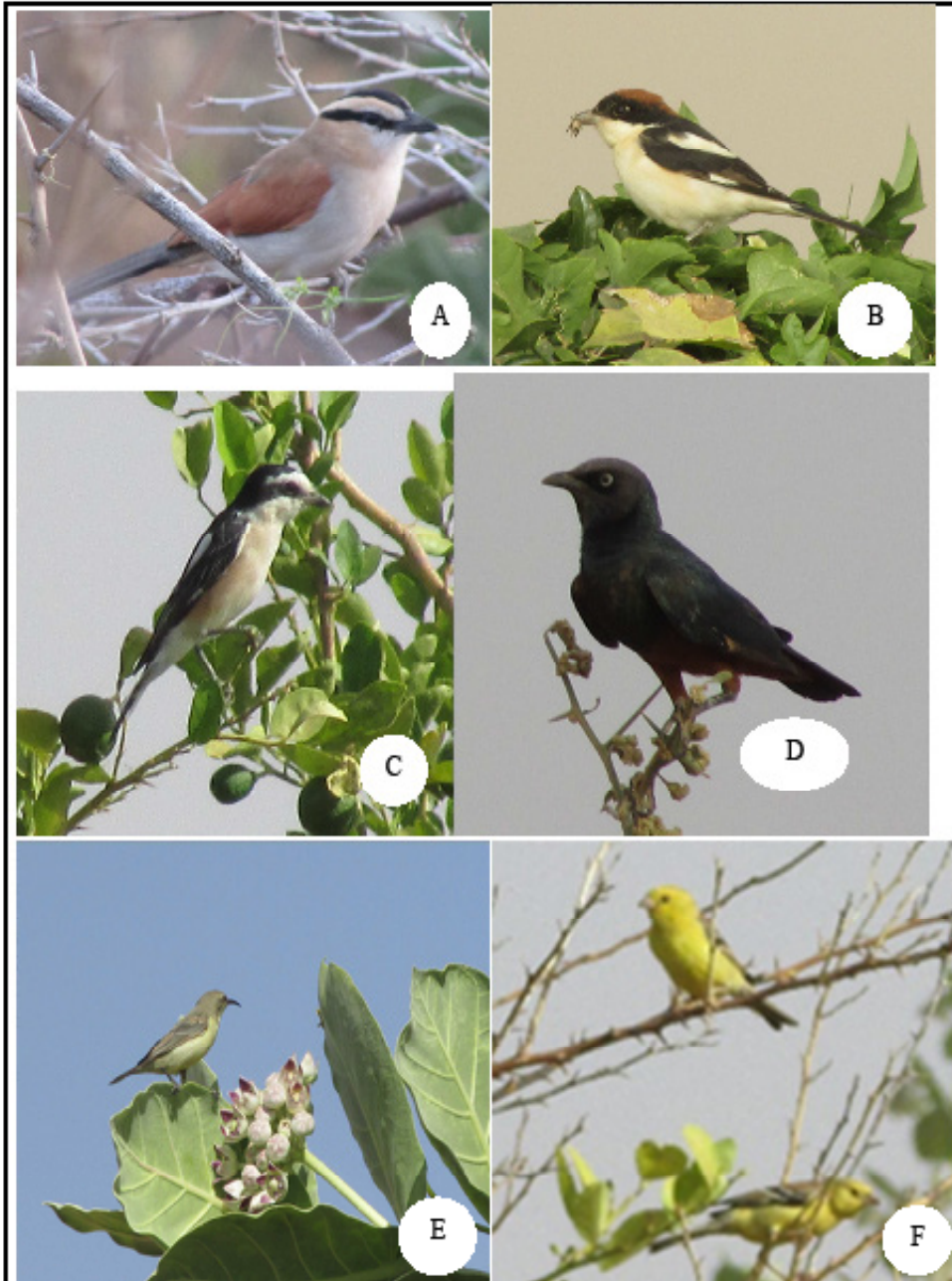
**Fig.7:(A)Black-billed Wood Dove. (B)Red-eyed Dove. (C) African Collared Dove. (D) Laughing Dove. (E)Eurasian Turtle Dove. (F) African Mourning Dove.**



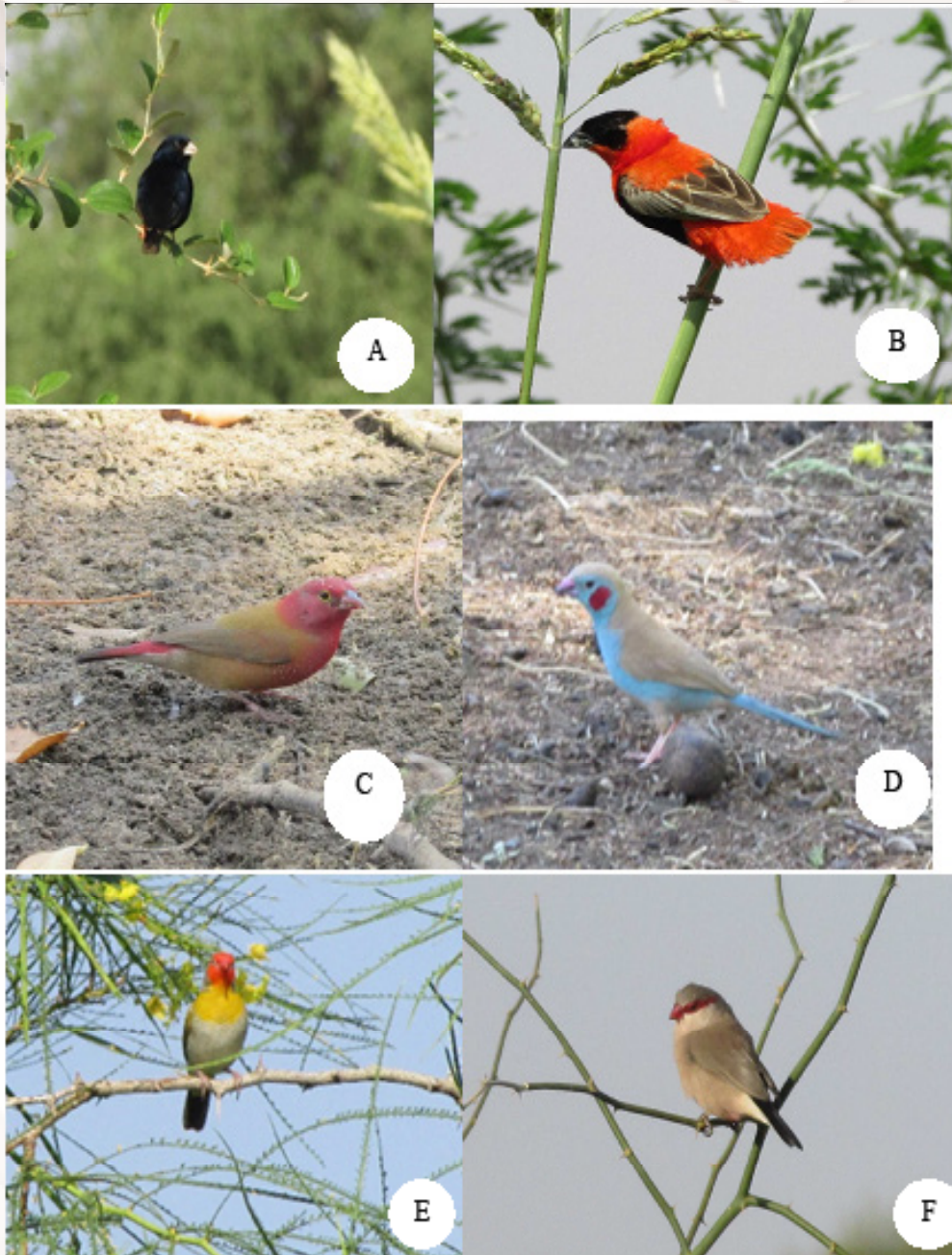
**Fig.8: (A) White-browed Coucal. (B) African Cuckoo. (C) African Marsh Owl. (D) Abyssinian Roller. (E) Little Bee-eater. (F) Northern Carmine Bee-eater.**



**Fig.9:(A) African Hoopoe. (B) Vieillot's Barbet. (C) White Wagtail. (D) Black eared Wheatear. (E) Black Scrub Robin. (F) Pied Wheatear.**



**Fig.10:-(A) Black-crowned Tchagra. (B) Woodchat Shrike. (C) Masked Shrike. (D) Chestnut-bellied Starling. (E)Copper Sunbird. (F) Sudan Golden-Sparrow.**



**Fig.11: (A)Purple Indigo bird. (B)Northern Red Bishop. (C)Red-billed Fire finch (D)Red-checked Cordoblen. (E) Green-winged Pytilia. (F) Black-rump Waxbill.**

#### 4. Discussion:

There were changes in the bird fauna in the El Rahad Abu Dakana town. There is little doubt which were probably associated to climatic changes and subsequent changes in the habitats (10) and (32). The current study shows 156 species of bird fauna were observed at El Rahad town. The result reflects the richness of the avifauna of the study area. Fruit gardens, orchards, vegetables farms provided trees, shrubs, grasses. All these structures introduce, in one way or another, accommodation, protection, roosting, resting, nesting, mating and feeding purposes to birds. It is well known that vegetation cover has a strong influence on the avifauna (33). The current study showed that 96 (61.5%) of the bird species encountered are passerines and the rest 60 (38.5%) falls within the rank of non-passerines. The small size of the majority of birds recorded is somewhat related to their movement, hiding, feeding, resting and nesting characters provided by the crowded crowns of trees and shrubs (Table 1). Nevertheless, the usual small size of passerine species and the diversity of trees and shrubs they occupy in study area sometimes make them hidden and as a result unseen by the surveyor and thus not recorded. (10) and (11). also found similar seasonal variation in birds of the Dinder National Park. The order Passeriformes included 21 families and 36 species followed by Coraciiformes with 6 families and 14 species, Falconiformes with 3 families and 20 species; Apodiformes included two families and 7 species. Three orders were included one family each with different numbers of species from 2 to 10, while 3 orders were represented by one family each, with one species each (Table 1). One species was recorded as Endangered (EN), also one species was recognized as Near Threatened (NT) and two species were ranked as Vulnerable (VU). All the 152 species were categorized as least concern by (34). Table I recorded Fifty-one out of recorded 156 species are resident breeding population. Nineteen species were African migrants, one hundred- nine species were Resident, while twenty-eight species were Palearctic migrants. Weavers and



Doves were seen in large Flocks seeking food in vegetables farms. The Northern Red Bishop and African silver bill founded as small group agriculture filed near the water. *Cercotrichas podobe*, *Ploceus intermedius* are associated with *Passer luteus* was seen mostly in shrubs while *Lamprotornis pulcheron* the ground seeking food.

### **5. Conclusion:**

This present study will provide a baseline of information for future studies concerning the birds of the study area.

Acknowledgments:

Thanks are due to the late Dr.Tigani M.H. Allam and to Dr. Dawi Musa Hamed for supervising this work.

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