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Cover Page Footnote

We thank all people for their contribution in field work

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PRELIMINARY CHECKLIST OF AVIFAUNA OF TAMANRASSET (SOUTH OF ALGERIA) WITH TWO NEW RECORDS IN ALGERIA

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ABSTRACT

Birds constitute a zoological group which is considered to be a good indicator of balance and biological diversity. The aim of this study was to investigate the birds of the region on Tamanrasset which is situated in the south of Algeria and has an area of 554.000 km². Direct observations with camera and a pair of binoculars, supported by ornithological surveys carried out by progressive frequently sampling, in each stations of study area, 44 bird species were observed in this region which fall into 12 orders and 24 families. Among these species, 3 new observations recorded for the 1st time belonging to White-rumped Seedeater (*Crithagra leucopygia*) and blue-napped mousebird (*Urocolius macrourus*) along with 2 other species, the rose-ringed parakeet (*Psittacula krameri*) and the African silver bill (*Euodice cantans*), are listed as an expansion in this region.

Keywords: Tamanrasset, Algeria, birds, *Urocolius macrourus*, *Crithagra leucopygia*.

INTRODUCTION

Birds constitute a zoological group which has been the subject of a large number of studies. Therefore, this class of vertebrates is well known and considered to be good indicators of balance and biological diversity.

In recent years, Algerian ornithology has undergone significant technical, organizational and institutional changes and is in the process of modifying profoundly the modalities of scientific production and reconfiguring the relationship that amateur naturalist have with the scientific world. Thus, the ornithology has enriched the list of Algerian bird species with several new species and confirmed the presence of others such us: Western reef heron (Telailia et al., 2018), Eurasian penduline tit (Telailia et al., 2020), western Reef Heron (telailia et al., 2018), rustic bunting (Djemadi et al., 2018), Moltoni's Warbler

Viechec and Haddad (2019) and the Jacobin cuckoo (Haddad and Afoutni, 2020). Algeria is considered the largest country in the Mediterranean basin and in Africa, four-fifths of which are occupied by the Sahara. Located 1,900 km southeast of the coast, on the other hand, the works on avifauna frequenting this region on a temporary or permanent basis are sorely lacking, apart from a few rare published notes (Belbachir, 2000).

For this purpose, a mission was organized, consisting mainly of amateur animal photographers in order to make a preliminary inventory of the species frequenting this region during the period of December 2019 and a visit to the population of the African silver bill discovered by (Belbachir, 2000).

MAERIAL AND METHODS

Study Area

Tamanrasset is located in the centre

of the Sahara, in the extreme south of Algerian, 1,900 km southeast of Algiers, 450 km as the crow flies South West of Djanet and about 400 km North of the Malian border. Covering an area of approximately 554,000 km², or ¼ of the overall area of Algeria, Tamanrasset is located between the 12th and 25th parallels of the Northern Hemisphere, straddling the Tropic of Cancer, and the 3rd and 6th meridians is from Greenwich. The region is characterized by a Saharan climate with mild winter (Sahki and Sahki 2004, Chenoune, 2005). Tamanrasset region is a compulsory stopover point for all the birds on the trans-Saharan migratory road.

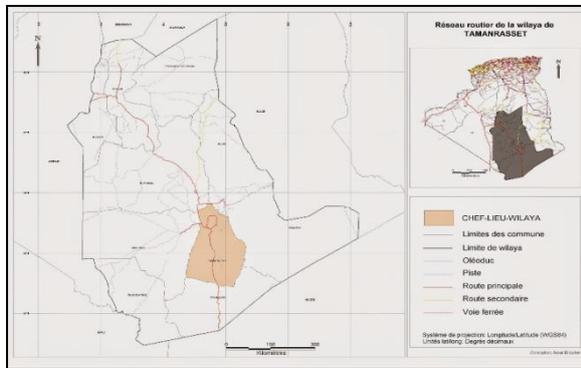


Figure 1: Geographic situation of the study area.

Methodology

During the month of December 2019, outings were carried out with the accompaniment of indigenous Touarg guides who know the region and its diversity. Eight sites were selected and a hundred kilometers travelled, between each station and another several stops were made to explore wadis, a region rich in green vegetation, and oases.

For the waterbird census at the study site, we used a pair of binoculars (Chinon Roof 8x30 field 7.5) for the observation and research of the species, a camera (Nikon Coolpix P900 and canon 7D with 150-600 mm) for taking pictures of the species encountered, an ornithological guide for the identification of species "Le guide ornitho", a notebook to note the species and comments and a vehicle for moving from one observation

point to another. During the first day, we went out in the hotel garden which is located North East of the city of Tamanrasset and then moved to the region about 100 km North East of the city of Tamanrasset (23°07'31"N 5°59'34"E). During morning of the second day, we inventoried the river from the same region, then moved to the Taghaouout region (22°40'07,95" N, 5°55'11,25" E) during the afternoon.

During the afternoon of the 3rd day, we visited the town of Tamanrasset where we stopped several times. Among the places, an orchard (22°40'00"N, 5°30'38"E) located 15 km south of the town of Tamanrasset, then the gardens and parks of the town of the same town Tamanrasset. In the evening, we moved 110 km west of downtown to the city of Abalessa (22°53'40"N 4°50'52"E). During the morning of the 4th day, we inventoried the orchards of the region then a small lake far (23°08'36.2"N 5°43'41.3"E) 30 km north of the city Tamanrasset. On the 5th day, we saw around the lakes. Regarding the region of Tinzaouten (19°57'13"N, 2°58'12"E) which is located 450 km South West of the capital of the wilaya, the observations were made by a naturalist from the region.

RESULTS AND DISCUSSION

The species observed in the different regions of Tamanrasset during the study period were 44 species which fall into 12 orders and 24 families (Table 1). The order of passerines was the most represented with 13 families and 26 species, followed by those of Columbiformes and Pteroclitiformes with a single family and 3 species for each order, the order of Charadriiformes and Accipitriformes was represented with a single family and 2 species. The other orders were represented by a single family. We noticed the first observation of the White-rumped Seedeater and the crested coliou and re-observation of the Black Scrub Robin and the Chestnut-bellied

Sandgrouse.

White-rumped Seedeater (*Crithagra leucopygia*)

The White-rumped Seedeater is mainly distributed in sub-Saharan countries, between Senegal and Ethiopia: Senegal, Gambia, South-West and South-East of Mauritania, south of Mali, Burkina Faso, south of Niger, North-East of Nigeria, southern Chad, northern Cameroon and the Central African Republic, southern Sudan, northeastern Zaire, western Uganda and, in the extreme limit, Eritrea, Ethiopia.



Plate 1: A *Crithagra leucopygia* adult feeds her chicks

We observed the white rumped seedeater in two sites in Tamanrasset. The first site (22 ° 39'58 "N, 5 ° 30'38" E), an orchard which is located 15 km south of the wilaya of Tamanrasset where we crossed over several individuals with the African Silver bill and 1 red-billed fire finch. The second site at a public garden in the town of Tamanrasset where we observed an adult feeding two young flying (Plate 1). Qninba et al., (2011) noted the fall nesting of Saharan birds in the Oued Ed-Dahb region. This may be due to the climatic condition (precipitation and

high temperature).

According to the investigations concerning the birds of the Sahel sold in the market of Tamanrasset, we found several individuals of the white-rumped seedeater (*Crithagra leucopygia*), Senegal parrot (*Poicephalus senegalus*), Grey Parrot (*Psittacus erithacus*), the African silver-billed (*Euodice cantans*).

As a result, we thought that the white rumped seedeater may have escaped from a cage in the city of Tamanrasset and now is expanding outside the city. This is the case of the African silver-billed which we found in several places apart from the region of Abalessa cited by Belbachir in 2001 which is located 120 km West of the city of Tamanrasset.

African Collared Dove and Laughing Dove (*Streptopelia decaocto* X *Spilopelia senegalensis*)

The first observation of a hybrid between the African Collared Dove and the laughing dove in Algeria (Plate 2). This species were observed in the Taghaouhaout region which is located about 50 km East of the city of Tamanrasset on December 25, 2019.



Plate 2: *Streptopelia decaocto* X *Spilopelia senegalensis* was observed in Taghaouhaout.

Table 1: List of avian species observed in the different regions of Tamanrasset.

Order	Family	Common name	Scientific name
Galliformes	Phasianidae	Common Quail	<i>Coturnix coturnix</i>
Accipitriformes	Accipitridae	North African	<i>Buteo buteo rufinus</i>
		Egyptian Vulture	<i>Neophron percnopterus</i>
Gruiformes	Rallidae	Common Moorhen	<i>Gallinula chloropus</i>
Charadriiformes	Scolopacidae	Common Snipe	<i>Gallinago gallinago</i>
		Green Sandpiper	<i>Tringa ochropus</i>
Pterocliiformes	Pteroclididae	Crowned Sandgrouse	<i>Pterocles coronatus</i>
		Lichtenstein's Sandgrouse	<i>Pterocles lichtensteini</i>
		Chestnut-bellied Sandgrouse	<i>Pterocles exustus</i>
Psittaciformes	Psittaculidae	Rose-ringed Parakeet	<i>Psittacula krameri</i>
Columbiformes	Columbidae	Rock Dove	<i>Columba livia</i>
		Eurasian Collared Dove	<i>Streptopelia decaocto</i>
		Laughing Dove	<i>Spilopelia senegalensis</i>
			<i>Streptopelia decaocto X Spilopelia senegalensis</i>
Strigiformes	Strigidae	Pharaoh Eagle-Owl	<i>Bubo ascalaphus</i>
Bucérotiformes	Upupidae	Eurasian Hoopoe	<i>Upupa epops</i>
Coliiformes	Coliidae	Blue-naped Mousebird	<i>Urocolius macrourus</i>
Falconiformes	Falconidae	Common Kestrel	<i>Falco tinnunculus</i>
Passériformes	Laniidae	Great Grey Shrike	<i>Lanius excubitor</i>
	Corvidae	Brown-necked Raven	<i>Corvus ruficollis</i>
	Alaudidae	Desert Lark	<i>Ammomanes deserti</i>
		Bar-tailed Lark	<i>Ammomanes cinctura</i>
	Hirundinidae	Rock Martin	<i>Ptyonoprogne fuligula</i>
	Phylloscopidae	Willow Warbler	<i>Phylloscopus trochilus</i>
		Common Chiffchaff	<i>Phylloscopus collybita</i>
	Léiothrichidae	Fulvous Babbler	<i>Argya fulva</i>
	Sylviidae	Western Orphean Warbler	<i>Sylvia hortensis</i>
		Sardinian Warbler	<i>Sylvia melanocephala</i>
African Desert Warbler		<i>Sylvia deserticola</i>	
	Muscicapidae	Black Scrub Robin	<i>Cercotrichas podobe</i>
		Blue Rock Thrush	<i>Monticola solitarius</i>
		White-crowned Wheatear	<i>Oenanthe leucopyga</i>
		Desert Wheatear	<i>Oenanthe deserti</i>
		Spotted Flycatcher	<i>Muscicapa striata</i>
		Black Redstart	<i>Phoenicurus ochruros</i>
	Passéridae	Desert Sparrow	<i>Passer simplex</i>
		Sudan Golden Sparrow	<i>Passer luteus</i>
	Estrilidae	Red-billed Firefinch	<i>Lagonosticta senegala</i>
		African Silverbill	<i>Euodice cantans</i>
	Motacillidae	Red-throated Pipit	<i>Anthus cervinus</i>
		White Wagtail	<i>Motacilla alba</i>
	Fringillidae	Trumpeter Finch	<i>Bucanetes githagineus</i>
		White-rumped Seedeater	<i>Crithagra leucopygia</i>
	Emberizidae	House Bunting	<i>Emberiza sahari</i>

Blue-Naped Mousebird (*Urocolius macrourus*)

The Blue-naped Mousebird was observed and photographed by an Algerian soldier (S. Bekkouche) in an oasis near the town of Tinzaouten which is located 450 south of the wilaya chief of Tamanrasset (Plate 3).

According to the soldier, he observed several individuals of the Blue-naped Mousebird. It is the first observation of this species in Algeria. The Blue-naped Mousebird is a species from the Sahelian and Sudanian zones.

Rose-Ringed Parakeet (*Psittacula krameri*)

The first sighting of the Rose-ringed Parakeet was in the far south of Algeria. A single individual observed in the hotel garden. In Algeria, 6-8 pairs of the ringed parakeet escaped from captivity in the gardens of Algiers between 1988-1990 and multiplied widely - their number was 422 birds in 2006 (Bendjoudi et al., 2013). In Morocco, the first observation of *Psittacula krameri* was noted near Nador in 2000 (Bergier et al., 2005).



Plate 3: *Urocolius macrourus* was observed in Tinzaouten.

Black Scrub Robin (*Cercotrichas podobe*)

The third observation of the Black Scrub Robin in the region of Tinzaouten was on May 3, 2019. This Sahelian species was first observed on February 8, 1968 in

Tamanrasset and may be on February 12, 1968 in the Central Hoggar (Isenmann & Moali, 2000).

Chestnut-Bellied Sandgrouse (*Pterocles exustus*)

The second observation of the Chestnut-bellied Sandgrouse was in May 2019 in the region of Tinzwatine which is located 450 km southwest of the city of Tamanrasset. The species was caught by residents of this region. According to Isenmann and Moali, (2000), the first observation of this species was on May 23, 1987 between Gara Ekar and Asamakka (Algerian-Niger border).

African Silverbill (*Euodice cantans*)

Very common species in all areas surveyed. The African Silverbill first observed by Belbachir in the Abalessa region about 100 km West of the town of Tamanrasset (Belbachir, 2000).

We observed the species in orchards in the Tazrouk region, about 150 km East of Tamanrasset city, and in the gardens in the city center of the capital of Wilaya which indicates the expansion of the species to Tamanrasset.

Sudan Golden Sparrow (*Passer luteus*)

Several individuals observed in the town of Tinzaouten and its surroundings. This Sahelian species was observed in the extreme south with a single evidence of nesting in January 1984 in Inguezam (Isenmann and Moali, 2000).

CONCLUSION

Seven species added to the list of Algerian birds cited by Isenmann and Moali 406 species. The case of these two new observations of the White-rumped Seedeater, Blue-naped Mousebird and adding Western Reef Heron, Eurasian Penduline Tit, Greater Spotted Eagle, Rustic Bunting, Moltoni's Warbler.

Therefore, it is necessary to make regular trips especially to the extreme South to inventory the species.

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