

A new species for Algeria, White-throated Bee-eater (Merops albicollis), observations of probably escaped individuals of Cutthroat Finch (Amadina fasciata) and Village Indigobird (Vidua chalybeata) and a checklist of southern Sahara birds

Belkacem Aimene Boulaouad<sup>1,2\*</sup>, Bachir Harzallah<sup>2</sup>, Khaled Ayyach<sup>2</sup>, Karim Attouche<sup>2</sup>, Walid Soukkou<sup>2</sup>, Djamel Hadj Aissa<sup>2</sup>, Hamza Faidi<sup>2</sup> & Mohamed Missoum<sup>2</sup>

Received: February 23, 2022 - Revised: September 14, 2022 - Accepted: September 20, 2022



Boulaouad, B. A., Harzallah, B., Ayyach, K., Attouche, K., Soukkou, W., Aissa, D. H., Faidi, H. & Missoum, M. 2022. A new species for Algeria, White-throated Bee-eater (*Merops albicollis*), observations of probably escaped individuals of Cut-throat Finch (*Amadina fasciata*) and Village Indigobird (*Vidua chalybeata*) and a checklist of southern Sahara birds. — Ornis Hungarica 30(2): 195–207. DOI: 10.2478/orhu-2022-0030

**Abstract** In this paper we present a report about the birds of the southern part of the Algerian Sahara. A total of 62 species were recorded with direct observations in nine different localities of two regions (from Tamanrasset city to In Guezzam city), belonging to 29 families and 12 orders in 2021. Three species were recorded for the first time in Algeria, White-throated Bee-eater (*Merops albicollis*), Cut-throat Finch (*Amadina fasciata*) and Village Indigobird (*Vidua chalybeata*). The latter two were probably escaped from captivity. The House Sparrow (*Passer domesticus*) were observed for the first time in this region.

Keywords: Algeria, bird species diversity, Merops albicollis, Amadina fasciata, Vidua chalybeata, North Africa, Palearctic Region, new records

Összefoglalás A szerzők a Szahara dél-algériai részéről közölnek madártani adatokat. Kilenc területen – Tamanrassettől In Guezzamig – 12 rendbe, 29 családba tartozó 62 madárfajt figyeltek meg 2021-ben, amelyek közül egy – fehértorkú gyurgyalag (Merops albicollis) – a területre új volt. A megfigyelt fajok között volt két olyan is, amelyeket korábban szintén nem láttak még a területen, viszont ezek – szalagpinty (Amadina fasciata), piroslábú vidapinty (Vidua chalybeata) – nagy valószínűséggel fogságból szökött példányok voltak. Egy új területen kimutatták a házi verebet (Passer domesticus) is.

Kulcsszavak: Algéria, madárfajok diverzitása, fehértorkú gyurgyalag, szalagpinty, piroslábú vidapinty, Észak-Afrika, Palearktikum, új megfigyelés

<sup>&</sup>lt;sup>1</sup> Department of Agronomy, SNV-TU Faculty, Mohamed El Bachir El Ibrahimi Bordj Bou Arreridj University, Algeria

<sup>&</sup>lt;sup>2</sup> Algerian Wildlife Watchers Association

<sup>\*</sup> corresponding author, e-mail: belkacemaimene.boulaouad@univ-bba.dz

#### Introduction

Given its vast area in Africa with more than 2 million km² and considered as the largest country in the Mediterranean basin, Algeria has an ecosystem unit classified biogeographically among the richest and most diverse countries of the Palearctic region. The Sahara is located in the south of the country and covers almost 90% of its area.

Several studies were carried out focusing on the diversity of birds in the Algerian Sahara, mostly in the northern part, such as in Ziban region (Farhi & Belhamra 2012) in Ghardaia (Chedad *et al.* 2020a, 2020b) and in three oases of the Northern Algerian Sahara (Biskra, Oued Souf and Ouargla, Guezoul *et al.* 2013).

A few studies were conducted on the diversity of the southern part of the Algerian Sahara. This part is the boundary between two biogeographic regions Palearctic and Afrotropical. In the last decades, the newest records of species were observed in the southern part such as the Moltoni's Warbler (Curruca subalpina) in El Borma (Viechec & Haddad 2019), Rüppell's Warbler (Curruca rupelli) in Djanet (Haddad & Afoutni 2019), Jacobin Cuckoo (Clamator jacobinus) in Tamanrasset (Haddad & Afoutni 2020a), African Crake (Crecopsis egregia) at Kerzaz (Haddad et al. 2021b), White-rumped Seedeater (Crithagra leucopygia) in Tamanrasset (Boulaouad et al. 2021), Blue-naped Mousebird (Urocolius macrourus) in Tinzaouten (Haddad & Bekkouche 2021), Dunn's Lark (Eremalauda dunni) in Djanet (Harzallah et al. 2021) and African Grey Woodpecker (Dendropicos goertae) in municipality of Tin Zaouatine, region of In Guezzam (Haddad & Afoutni 2022).

The objectives of the present work are to enrich the bibliography of the birds of the southern part of the Algerian Sahara and to describe the new observations of the White-throated Beeeater (*Merops albicollis*), and the probably escaped Cut-throat Finch (*Amadina fasciata*) and Village Indigobird (*Vidua chalybeata*) for the birds of Algeria.

#### **Material and Methods**

#### Study area

This study was conducted in the region of Tamanrasset, located in the south of Algeria, at about 2,000 km southeast from Algiers (*Figure 1*). The region is characterized by a Saharan climate with mild winter (Chenoune 2005). It is located at 1,400 m above the sea level and has a super-dry climate with temperature ranging between 12 °C and 40 °C (Hamdi 2013).

A field survey was conducted during the last week of December 2021 to collect data about the diversity of birds in nine localities from the region of Tamanrasset to the region of In Guezzam for about 400 km. Localities were chosen with dependence on vegetal cover, four in Tamanrasset and five in In Guezzam. Birds were surveyed in each locality all the day by a group of naturalists from Algerian Wildlife Watchers Association (AWWA).

The line transect method has been used in this study. This technique consists of walk in the study locality, a well-defined route several times, while advancing at a steady speed (1 to 2 km/h), marking a stop every 20 meters, and noting and photographing all birds seen and

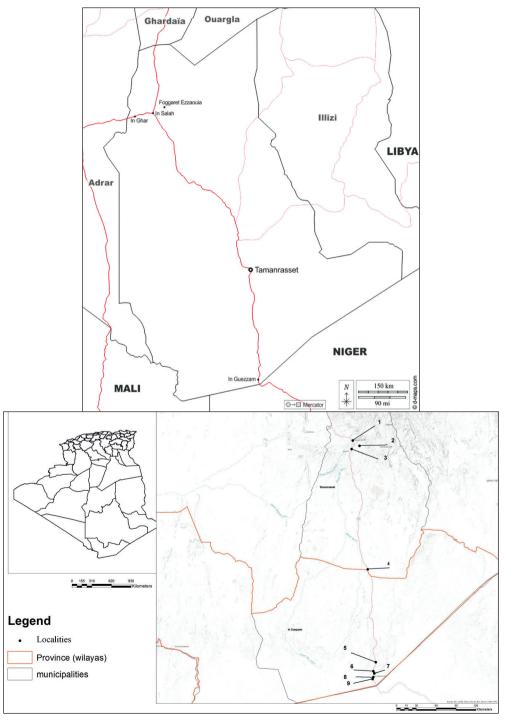


Figure 1. Geographical location of the study area (d-maps.com)

1. ábra A vizsgálati helyek földrajzi elhelyezkedése

heard by locating them in the course. Bird species were identified using standard field guides (Heinzel *et al.* 2004, Svensson 2012). We were using information from Isenmann and Moali (2000), for the geographical distribution of birds of Algeria.

The list of areas contains the name of locality, coordinates, short descriptions of the habitat, altitude

- 1. Tamanrasset: Tamanrasset city (22°46'56"N 5°31'47"E), with approx. 37 km², is the most visited place in this locality, gardens and green space, 1,370 m.
- 2. Tamanrasset: Agricultural zone (22°42'33"N 5°37'38"E) is located 20 km in the east of Tamanrasset with about 0.13 km², this locality is consisted of orchards and characterized by palm and citrus and vineyards, 1,340 m.
- 3. Tamanrasset: Agricultural zone in Amsel with about 0.4 km² (22°40'03"N 5°30'33"E) is located 20 km in the south of Tamanrasset city and is characterized by palm, citrus and grapes and a line of *Acacia* sp., 1,240 m.
- 4. Tamanrasset: Base of life (21°01'37" N 5°42'53"E) is located 200 km in the south of Tamanrasset and characterized by small construction and some ornamental trees, 620 m.
- 5.In Guezzam: Agricultural zone (19°45'37"N 5°48'31"E) is located about 40 km north of Ain Guezzam, this area occupies 1.1 km² which contains olive trees, palm trees and cereal farming, and the surround with common reed, 410 m.
- 6. In Guezzam: *Acacia* trees (19°38'20"N 5°46'23"E) is located 10 km north of In Guezzam city, this locality is an orchards, characterized by *Acacia* sp. trees, 405 m.
- 7. In Guezzam: Agricultural zone (19°36'38"N 5°47'06"E) located on the north of In Guezzam city. It is characterized by palm trees, olive trees and mango trees with 0.8 km², 410 m.
- 8. In Guezzam: In Guezzam city (19°33'31"N 5°46'13"E), with a surface of about 12 km² where we visited green space and trees in the village, 400 m.
- 9.In Guezzam: Sewage treatment station (19°31'57.9"N 5°45'29.4"E) is located 2.8 km southwest of In Guezzam city and it is characterized by common reed and some grace, 410 m.

#### Results

A total of 62 bird species belonging to 29 families and 12 orders were recorded in the southern part of the Algerian Sahara (*Table 1*). The richest order in species was Passeriformes with 37 species, followed by Charadriiformes and Pelecaniformes with six species, Columbiformes with three species and Bucerotiformes and Falconiformes with two species. The rest of the orders were represented by one species.

The number of species observed at different localities are varied between 5 and 34, as follows (*Figure 2*): a total of 34 species were observed in the agricultural area near In Guezzam city, 30 species were observed in wetland, 29 were observed in Amsel region, 21 species in the 5. locality which is an agricultural area, 14 species were observed in the 2. and 8. localities, 13 species were recorded in Tamanrasset city, 12 species were observed in Acacia trees and the lowest richness was observed in the 4. locality with five species.

- Table 1. Checklist of birds identified in the Tamanrasset region, Algeria. Numbers corresponds to the list of localities in Materiel and Methods (\* probably escaped from captivity) (IOC World Checklist version 11.2, Gill et al. 2021)
- 1. táblázat Az algériai Tamanrasset régióban talált madarak fajlistája. A helységek listája a Material and Methods fejezetben található (\* valószínűleg fogságból szökött) (IOC World Checklist version 11.2, Gill et al. 2021)

Order	Family	Species	Common name	Localities
Anseriformes	Anatidae	Anas crecca	Eurasian Teal	9
Pterocliformes	Pteroclidae	Pterocles coronatus	Crowned Sandgrouse	5
Columbiformes	Columbidae	Columba livia	Rock Dove	1,2,3,6,7,8,9
		Streptopelia decaocto	Eurasian Collared Dove	1,2,3,5,6,7,8,9
		Spilopelia senegalensis	Laughing Dove	1,2,3,5,6,7,8,9
Gruiformes	Rallidae	Fulica atra	Eurasian Coot	9
Charadriiformes	Recurvirostridae	Himantopus himantopus	Black-winged Stilt	9
	Charadriidae	Charadrius dubius	Little Ringed Plover	9
	Scolopacidae	Calidris temminckii	Temminck's Stint	9
		Calidris minuta	Little Stint	9
		Tringa ochropus	Green Sandpiper	9
		Tringa nebularia	Common Greenshank	9
Ciconiiformes	Ciconiidae	Ciconia ciconia	White Stork	9
	Threskiornithidae	Platalea leucorodia	Eurasian Spoonbill	9
Pelecaniformes	Ardeidae	Nycticorax nycticorax	Black-crowned Night Heron	7
		Bubulcus ibis	Western Cattle Egret	5,7,9
		Ardea cinerea	Grey Heron	7
		Ardea purpurea	Purple Heron	7
		Egretta garzetta	Little Egret	9
Accipitriformes	Accipitridae	Neophron percnopterus	Egyptian Vulture	1,4,5
Strigiformes	Strigidae	Asio flammeus	Short-eared Owl	7
Bucerotiformes	Upupidae	<i><b>Upupa epops</b></i>	Eurasian Hoopoe	2,3,7
Coraciiformes	Meropidae	Merops albicollis	White-throated Bee-eater	3
Falconiformes	Falconidae	Falco tinnunculus	Common Kestrel	3,7,9
raiconnormes		Falco biarmicus	Lanner Falcon	3,7
Passeriformes	Laniidae	Lanius excubitor	Great Grey Shrike	2,3,5,6,7,9
	Corvidae	Corvus ruficollis	Brown-necked Raven	1,2,3,4,5,6,7,8,9
	Alaudidae	Alaemon alaudipes	Greater Hoopoe-lark	3,4,6
		Ammomanes deserti	Desert Lark	3,4,5,6,7
		Galerida cristata	Crested Lark	7

Order	Family	Species	Common name	Localities
Passeriformes	Hirundinidae	Ptyonoprogne obsoleta	Pale Crag Martin	1,2,3,5,6,7,8,9
		Hirundo rustica	Barn Swallow	5
	Phylloscopidae	Phylloscopus bonelli	Western Bonelli's Warbler	7
		Phylloscopus trochilus	Willow Warbler	3,5,7
		Phylloscopus collybita	Common Chiffchaff	1,2,3,5,7,8,9
	Sylviidae	Sylvia borin	Garden Warbler	2
		Curruca hortensis	Western Orphean Warbler	3
		Curruca melanocephala	Sardinian Warbler	1,2,3,5,6,7,8
		Curruca iberiae	Western Subalpine Warbler	2,3,7
	Leiothrichidae	Argya fulva	Fulvous Babbler	2,3
		Muscicapa striata	Spotted Flycatcher	7
	Muscicapidae	Luscinia svecica	Bluethroat	5
		Ficedula hypoleuca	European Pied Flycatcher	7
		Phoenicurus ochruros	Black Redstart	3
		Monticola solitarius	Blue Rock Thrush	3
		Oenanthe oenanthe	Northern Wheatear	3,7
		Oenanthe deserti	Desert Wheatear	3,5,6,7,8,9
		Oenanthe leucopyga	White-crowned Wheatear	1,2,3,4,5,6,7,8,9
	Passeridae	Passer domesticus	House Sparrow	5,7,8
		Passer simplex	Desert Sparrow	3,
		Passer luteus	Sudan Golden Sparrow	7,8,9
	Estrildidae	Euodice cantans	African Silverbill	1,3,5,7,8,9
		Lagonosticta senegala	Red-billed Firefinch	1,3,8
		* Amadina fasciata	* Cut-throat Finch	7
	Viduidae	* Vidua chalybeata	* Village Indigobird	1
	Motacillidae	Motacilla flava	Western Yellow Wagtail	9
		Motacilla alba	White Wagtail	3,5,7,9
		Anthus campestris	Tawny Pipit	7
		Anthus trivialis	Tree Pipit	9
		Anthus cervinus	Red-throated Pipit	9
	Fringillidae	Bucanetes githagineus	Trumpeter Finch	3,5,7,9
	Emberizidae	Emberiza sahari	House Bunting	1,2,3,5,6,7,8,9
13	29	62		

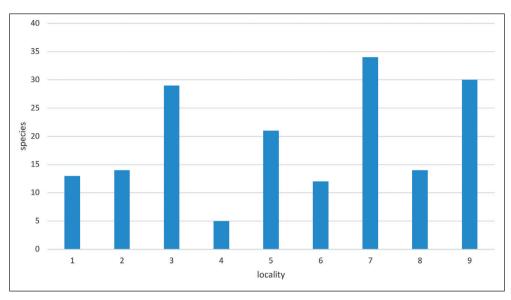


Figure 2. Distribution of the number of species per locality 2. ábra A vizsgált területek fajszámeloszlása

During this study, a new species were observed for the first time in Algeria (*Figure 3*) White-throated Bee-eater, and two probably escaped species: Cut-throat Finch, Village Indigobird and a new locality of distribution for the House Sparrow.

**White-throated Bee-eater** was observed at Oued Azerzi in the locality of Amsel in December 25<sup>th</sup>, 2021. Unfortunately, we could not spot this species after three days when we returned back to the same region.

**Cut-throat Finch** was recorded in an agriculture area situated in In Guezzam in December 28<sup>th</sup>, 2021 with a group of African Silverbill (*Euodice cantans*) perched on reed beds.

**Village Indigobird** was observed in Tamanrasset city in December 31<sup>st</sup>, 2021. This species was noted with the company of a group of Red-billed Firefinch (*Lagonosticta senegala*).

**House Sparrow** was observed in three localities. Two groups was recorded in an agricultural zone (5. and 7. locality). The third group was in In Guezzam city.

#### Discussion

A total of 62 species were observed in the localities of the study area. The observed bird species represent 18.45% of the avifauna cited by Ledant *et al.* (1981) and 15.27% recorded by Isenmann and Moali (2000). A similar number of species (56) was observed in Tamanrasset (Boulaouad *et al.* 2021). For the northern part of the Algerian Sahara, Farhi and Belhamra (2012) counted 124 species belonging to 15 orders and 29 families and the most represented order was Passeriformes with 58 species. Guezoul *et al.* (2013) counted 59 species in the palm of Northern Algerian Sahara. Chedad *et al.* (2020) reported 55 species at Kef Doukhane. The southern part of the Algerian Sahara is a compulsory stopover point



Figure 3. New species for the avifauna of Algeria: White-throated Bee-eater, 25<sup>th</sup> December 2021, Oued Azerzi (photo Djamel Hadj Aissa)

3. ábra Új faj Algéria madárfaunájában: fehértorkú gyurgyalag, 2021. december 25., Oued Azerzi (fotó: Hamza Faidi és Djamel Hadj Aissa)

for all the birds on the trans-Saharan migratory pathway and it is considered as an important area for research of Afrotropical birds.

## White-throated Bee-eater (Merops albicollis)

Two species of bee-eater are present in Algeria: the European Bee-eater (*Merops apiaster*) and the Blue-cheeked Bee-eater (*Merops persicus*) (Isenmann & Moali 2000). The European Bee-eater is a widespread breeder from the coast to the northern edge of the Sahara and is present from April to September (Isenmann & Moali 2000). At Tassili, the White-throated

Bee-eater was observed both during post-breeding passage from August 25<sup>th</sup> to October 9<sup>th</sup> and eventually during pre-breeding passage from April 13<sup>th</sup> to May 11<sup>th</sup> in 1960. The Bluecheeked Bee-eater present in the northern Sahara, stems its reproduction in three distinct regions (Biskra, Mzab and Figuig). Our observation of the White-throated Bee-eater is the first for Algeria. Its distribution ranges from southern Mauritania and Senegal in the west to south-western Saudi Arabia and western Yemen in the east (Jacobs *et al.* 2018). In the Western Sahara, this sub-Saharan species has recently occurred in two mentions Dakhla: a bird recorded in Gleib Jédiane on 5<sup>th</sup> and 6<sup>th</sup> December 2013 and another in Dakhla from 28<sup>th</sup> February to 1<sup>st</sup> May 2017 (Jacobs *et al.* 2018, Bergier & Thevenot 2019). According to the observations quoted above in Western Sahara, the species can be considered as accidental in the country.

#### Cut-throat Finch (Amadina fasciata)

The Estrildidae family is represented in Algeria by two species: the Red-billed Firefinch and African Silverbill (Belbachir 2000, Haddad & Afoutni 2020b). A third species, the Cutthroat Finch was observed in agricultural zones at In Guezzam. According to Borrow and Demey (2020), this is a sub-Saharian species which can be found particularly in the Sahel. Clouet and Joachim 2013 observed this species in Adrar of the Iforas, which is located in 150 km southwest of our study site in In Guezzam.



Figure 4. Probably escaped Cut-throat Finch with African Silverbill, 28th December 2021, In Guezzam (photo Karim Attouche)

4. ábra Valószínűleg fogságból szökött szalagpinty afrikai ezüstcsőrűpinty mellett, 2021. december 28., In Guezzam (fotó: Karim Attouche)

#### Village Indigobird (Vidua chalybeata)

The Village Indigobird is a breeding bird in most of Africa south of the Sahara Desert. According to Payne *et al.* (2000), the species is a host-specific brood parasite which deposits its eggs exclusively in the nest of an estrildid finch, the Red-billed Firefinch. The observation of Village Indigobird with a group of Red-billed Firefinch (*Figure 5*) in Tamanrasset city can lead to a new breeding bird for the avifauna of Algeria. Clouet and Joachim 2013 observed the Village Indigobird, in Aïr in the north of Niger. According to several observers of the Algerian avifauna, this species was found for sale (nearly 200 individuals for sale at 4.5 and 15 euros for one individual) in pet stores in the city of Tamanrasset.

# House Sparrow (Passer domesticus)

According to Isenmann and Moali (2000), the House Sparrow is still absent from Tamanrasset and its surrounding (Ahaggar), and recall a potential overall competition with House Bunting (Emberiza sahari). Haddad et al. (2021a) was recorded the species in the south-western part of the Algerian Sahara, exactly in Tindouf and its surroundings. The observation of these birds in In Guezzam are considered as new locality for Algeria.



Figure 5. Probably escaped male Village Indigobird with two females and a male of Red-billed Firefinch, 31st December 2021, Tamanrasset city (photo Khaled Ayyach)

5. ábra Valószínűleg fogságból szökött hím piroslábú vidapinty két tojó és egy hím vörös amarant társaságában, 2021. december 31., Tamanrasset (fotó: Khaled Ayyach)



Figure 6. Male House Sparrow, 28th December 2021, Agricultural zone at In Guezzam (photo Bachir Harzallah)

6. ábra Hím házi veréb, 2021. December 28. In Guezzam (Fotó: Bachir Harzallah)

### Conclusion

The results of this study revealed the presence of 3 new species for the Algerian avifauna and a new location of the House Sparrow. Note that the White-throated Bee-eater can be considered as an accidental species in Algeria. We must also note and conclude that Cutthroat Finch and Village Indigobird can be considered as cage releases and not migratory or accidental visitors in the region. They are indeed species introduced voluntarily, based on the big number of individuals sold in pet stores.

We would like this area to be a center of interest of specialists in the upcoming years in order to update our data on vertebrate fauna and find out whether the populations are in a phase of progression or regression.

# Acknowledgements

We are grateful to Boulaouad Djallal and Trirat Ichrak for their help with the field work, and we particularly acknowledge the assistance of Telailia Salah, Ailam Oussama and all member of AWWA.

#### References

- Belbachir, F. 2000. Première observation d'une colonie de Capucin bec-d'argent *Euodice cantans*, dans le Sahara central algérien [First record of colony of African Silverbill *Euodice cantans* in the Algerian central Sahara]. Alauda 68(2): 149–151. (in French)
- Bergier, P. & Thevenot, M. 2019. Afrotropical species in the southwestern Palearctic: Recent changes in the Atlantic Sahara (Morocco). Alauda 87(1): 25–39.
- Borrow, N. & Demey, R. 2020. Field guide to birds of Western Africa. Christopher Helm, London
- Boulaouad, B. A., Ailam, O., Telailia, S., Harzallah, B., Ayyach, K., Missoum, M., Bekkouch, A. & Lamia, B. 2021. Preliminary checklist of avifauna of Tamanrasset (South of Algeria) with two new records in Algeria. Journal of Bioresource Management 8(3): 1–10.
- Chedad, A., Bendjoudi, D. & Guezoul, O. 2020a Expansion of some species of the Fringillidae family in the Algerian Northern Sahara. Current Trends in Natural Sciences 9(18): 92–99. DOI: 10.47068/ctns.2020. v9i18.013
- Chedad, A., Bendjoudi, D. & Guezoul, O. 2020b Biodiversité de l'avifaune aquatique d'une zone humide artificielle à Kef Doukhane (Ghardaïa, Sahara Algérien) [Biodiversity of waterbirds in the artificial wetland of Kef Doukhane (Ghardaïa, Algerian Sahara)]. Bulletin de la Société Zoologique de France 145(4): 383–400. (in French)
- Chenoune, K. 2005. La flore et la végétation du Hoggar [The flora and vegetation of the Hoggar]. Bois et Forêts des Tropiques 284(2): 79–83. (in French)
- Clouet, M. & Joachim, J. 2013. Variations in bird communities of the Saharan mountains. Ostrich 84(3): 205–211. DOI: 10.2989/00306525.2013.867550
- Farhi, Y. & Belhamra, M. 2012. Typologie et structure de l'avifaune des Ziban (Biskra, Algérie) [Typology and structure of the Ziban's avifauna (Biskra, Algeria)]. Courrier du Savoir 13: 127–136. (in French)
- Haddad, K. & Afoutni, L. 2019 Première observation documentée d'une Fauvette de Rüppell *Sylvia rupelli* en Algérie [First documented record of Rüppel's Warbler *Sylvia rupelli* in Algeria]. Alauda 87(2): 165. (in French)
- Haddad, K. & Afoutni, L. 2020a Première observation du Coucou jacobin *Clamator jacobinus* en Afrique du Nord [First record of Jacobin Cuckoo *Clamator jacobinus* in North Africa]. Alauda 88(1): 71–72. (in French)
- Haddad, K. & Afoutni, L. 2020b Nouvelles localités et répartition du Capucin bec-d'argent *Euodice cantans* dans le sud de l'Algérie [New localities and distribution of African Silverbill *Euodice cantans* in Southern Algeria]. Alauda 88(2): 144–146. (in French)
- Haddad, K. & Afoutni, L. 2022. Premièr signalement du Pic Goertan *Dendropicos goertae* en Afrique du Nord
  [First record of African Grey Woodpecker *Dendropicos goertae* in North Africa]. Alauda 90(3): 73–76.
  (in French)
- Haddad, K. & Bekkouche, S. 2021. Blue-naped Mousebird and Black Scrub Robin at Tamanrasset, Algeria, in 2018–19. Dutch Birding 43(2): 147–149.
- Haddad, K., Bellatreche, M., Mebarki, M. T. & Afoutni, L. 2021a Données nouvelles sur l'aire de répartition du moineau domestique *Passer domesticus* en Algérie [New data on the range of the House Sparrow *Passer domesticus* in Algeria]. – Alauda 89(4): 297–300. (in French)
- Haddad, K., Zaidi, H. & Achrini, M. 2021b African Crake at Kerzaz, Algeria, in November 2020. Dutch Birding 43(4): 39–40.
- Harzallah, B., Ayyach, K., Benmokhtar, A. & Telailia, S. 2021. Première observation de l'Alouette de Dunn *Eremalauda dunni* en Algérie [First observation of Dunn's Lark in Algeria]. Alauda 89(4): 293–294. (in French)
- Heinzel, H., Fitter, R. & Parslow, J. 2004. Oiseaux d'Europe, d'Afrique du Nord et du Moyen Orient [Birds of Europe, North Africa and the Middle East]. Delachaux et Niestlé, Neuchâtel
- Guezoul, O., Chenchouni, H., Sekour, M., Ababsa, L., Souttou, K. & Doumandji, S. 2013. An avifaunal survey of mesic manmade ecosystems "Oases" in Algerian hot-hyperarid lands. – Saudi Journal of Biological Sciences 20(1): 37–43.
- Gill, F., Donsker, D. & Rasmussen, P. (eds.) 2021. IOC World Bird List (v11.2). DOI: 10.14344/IOC. ML.11.2.
- Isenmann, P. & Moali, A. (eds.) 2000. Oiseaux d'Algérie [Birds of Algeria]. Société d'études ornithologiques de France, Paris (in French)

# B. A. Boulaouad, B. Harzallah, Kh. Ayyach, K. Attouche, W. Soukkou, D. H. Aissa, H. Faidi & M. Missoum

- Jacobs, A., Herman, B. & Bertrands, J. 2018. White-throated Bee-eaters in Western Sahara, Morocco, in December 2013 and February–May 2017. Dutch Birding 40(1): 29–32.
- Ledant, J. P., Jacob, J. P., Jacobs, P., Malher, F., Ochando, B. & Roche, J. 1981. Mise à jour de l'avifaune Algérienne [Update of the Algerian avifauna]. Gerfaut 71: 295–394. (in French)
- Payne, R. B., Payne, L. L., Woods, J. L. & Sorenson, M. D. 2000. Imprinting and the origin of parasite-host species associations in brood-parasitic Indigobirds, *Vidua chalybeata*. – Animal Behaviour 59(1): 69–81. DOI: 10.1006/anbe.1999.1283
- Svensson, L. 2012. Le guide ornitho [The Ornitho Guide]. Delachaux et Niestlé (in French)
- Viechec, A. & Haddad, K. 2019. Nouvelles observations de la Fauvette de Moltoni *Sylvia subalpina* en Algérie [New records of Moltoni's Warbler *Sylvia subalpina* in Algeria]. Alauda 87(4): 346–347. (in French)

