

African Royal Tern (*Thalasseus maximus albididorsalis*), a breeding species in Morocco?

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Introduction

The African Royal Tern *Thalasseus maximus albididorsalis* is distributed on the west of Africa, breeding from Mauritania to the south of the Guinea Gulf (Birdlife International 2014). In winter the species is found from the Bay of Dakhla, southern Morocco, to the Skeleton Coast of Namibia (Gochfeld & Burger 1996).

Breeding populations in Western Africa

The main breeding locations in West Africa are located on the coast of Mauritania, in the National Park of Banc d'Arguin. These are large colonies with highly fluctuating populations, 16,900 pairs in 1998 to 15,000 in 2004 (Isenmann 2006). Incubation begins mid-April and continues for 31 days. Clutches are usually composed of a single egg and the chick hatches between mid-May and June (Dragesco 1961; Campredon 1987; Isenmann 2006). The birds stay in the colony for 30 more days until mid to late July. Then juveniles leave the colony and are fed by adults for an undetermined period. Juveniles stay with adults for 5 to 8 months. They become sexually mature by the third or fourth year of age (Gochfeld & Burger 1996).

The postnuptial dispersion occurs mainly to the south along the coast between Senegambia, Ivory Coast and Ghana (Isenmann 2010). There seems to be a dispersion of birds northward, joining non-breeding individuals, reaching the Strait of Gibraltar, peaking in August and September (Thévenot 2003). It is not known how far they can get through these northern movements and whether it is linked to the exploitation of a particular fish source.

Observations in Europe

The Royal Tern has been recorded in Britain, Ireland, Norway and the Azores. Although most of the observers could not differentiate the subspecies, these birds might correspond to the nominal subspecies distributed throughout North America, the Caribbean and northern South America (De Juana 2006). In Spain and Portugal there are few observations that are concentrated mainly in the area of the Bay of Cadiz, the Strait of Gibraltar, and, to a lesser extent, on the Mediterranean coast, seemingly corresponding to the African subspecies. Most observations are of adult birds and take place between late July and early November, and may relate to a period of postnuptial northward dispersion from breeding colonies in West Africa (De Juana 2006).

Observations in Morocco

The Royal Tern is considered to be scarce in Morocco although it is locally common during migration and winter. Most of the observations are distributed along the Atlantic coast and the Strait of Gibraltar, and to a lesser extent on the Mediterranean coast (Thévenot *et al.* 2003). However, most of the records come from the southern Atlantic Sahara, where Valverde (1957) first observed it on 8 April 1955, mentioning a bird feeding in the vicinity of Villa Cisneros (now Dakhla). Nowadays, it is common during winter in the Bay of Dakhla and to

a lesser extent at Khnifiss, Tantan Plage (Bergier *et al.* 2009-2013) and Oued Draa, at the mouth of Oued Massa and Oued Souss (pers obs.).

During the summer months there are fewer observations, possibly due to the small number of observers visiting the region at this time of the year. It is important to highlight the following observations: 30 birds in early July 2009 in the Bay of Dakhla (Ferraz Lopez *in* Bergier *et al.* 2010), approximately 50 birds at Dakhla on July 4-5, 7 birds at the mouth of Oued Ouma Fatma and others at Tantan Plage on July 7, 2011 (Richard Bonser *et al. in* Bergier *et al.* 2011) and 19 birds at Khnifiss on June 26, 2011 (Hinley Stewart *et al. in* Moroccan birds).

Discussion: the African Royal Tern, a breeding species in Morocco?

There are three records concerning the possible reproduction of the species on the Moroccan Atlantic coast:

- Valverde (1957) assumes that it is a breeding species, quoting Riegenbach (1903) who refers to the capture of one specimen on 8 June 1902 at Dakhla, and two with well-developed sexual organs at Bahía del Galgo. Valverde mentions the possibility of breeding colonies located on the Islet of Arguim, Mauritania.
- A pair feeding a juvenile was observed in the wetlands of Oualidia on 25 July 1977 (Dubois 1979).
- Additionally, breeding behaviour among more than 200 individuals, and three young birds were recorded in the Bay of Dakhla in July – August 2012, which was considered as a possible indicator of breeding in the country (Qninba *et al.* 2012).

For our part, we have got the following results:

- On 21 and 22 July 2014 we observed approximately 200 individuals of *T. maximus* between Punta de la Sarga and the town of Dakhla. We recorded several adults in flight carrying food and five first-year juveniles with yellowish legs. The afternoon of 22 July 2014 we observed an adult feeding a first-year juvenile in the middle of a flock of more than 100 *T. maximus* and *H. caspia* near Punta de la Sarga.
- The afternoon of 26 July 2014 we observed approximately 300 individuals at the Khnifiss National Park, most of them on the sandbar at the mouth of the lagoon.
- On the morning of 27 July 2014 at the same location, we saw over 300 birds, most of them adults and about 40 first-year juveniles. We observed several individuals in flight, bringing food from the lagoon or the sea to the large group, which was located on the sandbar at the mouth of the lagoon. We observed eight adults feeding first-year juveniles. Among the juveniles, we observed individuals with legs of different coloration: yellowish, blackish and yellowish with black markings; this indicates the presence of different ages. It should be noted that most juveniles that were fed had yellowish legs.
- On 27 July 2014, at the mouth of Oued Chebeika, we observed an adult among a mixed flock of gulls and terns.



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Photos 1, 2 and 3. Flock of terns *T. maximus*, *T. sandvicensis* and *S. hirundo* on the sandy islands of Khniffis Lagoon, 27 July 2014

Isenmann (2006) points out that the species prefers to establish their colonies on sandbars and sandy islets at the Bank d'Arguin in 90% of cases: there are only a few habitats like these in the Atlantic Sahara.

- The Dakhla Bay is approximately 450 kilometres from the closest breeding colony known, a relatively easy flying distance for a large tern. It holds some suitable habitats but is submitted to an important human disturbance. Qninba *et al.* (2012) suspected the breeding of *T. maximus* on Herne Island, without providing further details than the previously discussed observation. However, it has been subsequently proved that the island is not suitable for the reproduction of this species as it easily reached by foot at low tide and is frequented by dogs (A. Qninba in Bergier *et al.* 2014).
- The Khnifiss National Park is located about 1,000 kilometres from the Banc d'Arguin and has similar environmental conditions to those in the Mauritanian coast. *Sterna hirundo* and *Larus genei* have bred there (Thévenot *et al.* 2003) and *L. michahellis* and *L. marinus* regularly do. These colonies, along with significant numbers of *T. sandvicensis*, *H. caspia* and other species, can act as an attractant for new species of gulls and terns to establish in this location.
- There are no other sandy islets in the Moroccan Atlantic Sahara and all the other sandbars seem too small to hold breeding colonies.

Although the African Royal Tern appears to be in a process of expansion, following the African Atlantic coast to the north and increasing the number of observations on the Moroccan coast, there is no (yet) a definitive proof of African Royal Tern breeding in Morocco.



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Photos 4 and 5. Feeding of juveniles, Khniffis Lagoon 27 July 2014



Photo 6. Young birds of different ages at Khnifiss Lagoon, 27 July 2014

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Photos 7 and 8. First (left) and second year (right). Khnifiss, 27 July 2014

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