

# RECENT AND EXCEPTIONAL IRRUPTION OF THE RAZORBILL *ALCA TORDA* (LINNAEUS, 1758) ON THE ALGERIAN COASTLINE

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**Boutabia, L., Mena, M., Eddine Mederbal, K., Aimene Boulaouad, B., Ayyach, K., Harzallah, B., Missoum, M. & Telailia, S.: Recent and exceptional irruption of the Razorbill *Alca torda* (Linnaeus, 1758) on the Algerian coastline. Nat. Croat., Vol. 32, No. 1, 233-239, 2023, Zagreb.**

The Algerian coastline, known for its diverse array of fauna primarily dependent on marine ecosystems, has recently experienced notable changes in its community, perhaps due to the severe weather conditions in the North Atlantic. To explore this phenomenon, we conducted an extensive survey of the entire Algerian coast, specifically focusing on fishing ports and beaches, during November and December of 2022. Our objective was to investigate the remarkable and recent irruption of the razorbill *Alca torda*, which typically spends the winter in the open sea. Throughout our study, we documented a total of 32 sightings of razorbill individuals, including both live specimens observed within harbors (as depicted in Fig. 2 & 3) and deceased individuals washed up on the beaches.

**Key words:** coastline, *Alca torda*, winter, irruptions, Algeria

**Boutabia, L., Mena, M., Eddine Mederbal, K., Aimene Boulaouad, B., Ayyach, K., Harzallah, B., Missoum, M. & Telailia, S.: Nedavna neobična najezda plosnatokljunih njorki *Alca torda* (Linnaeus, 1758) na alžirskoj obali. Nat. Croat., Vol. 32, No. 1, 233-239, 2023, Zagreb.**

Na alžirskoj obali, poznatoj po njejoj raznolikoj fauni, primarno ovisnoj o morskim ekosustavima, nedavno su primijećene značajne promjene, i to vjerojatno zbog vrlo lošeg vremena na Sjevernom Atlantiku. Da bismo istražili taj fenomen, tijekom studenog i prosinca 2022. poduzeli smo opsežno istraživanje cijele alžirske obale, fokusirajući se na ribarske luke i plaže. Cilj je bio istražiti nedavnu neobičnu navalu plosnatokljunih njorki *Alca torda*, koje obično zimu provode na otvorenom moru. Tijekom našeg istraživanja dokumentirali smo ukupno 32 opažanja ovih njorki, uključujući kako žive primjerke uočene u lukama (npr. Fig. 2 & 3) tako i uginule jedinke koje je more izbacilo na plaže.

**Ključne riječi:** obalna linija, *Alca torda*, zima, najezda, Alžir

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## INTRODUCTION

The razorbill *Alca torda*, a pelagic species found in the North Atlantic, has a subspecies called *A. t. islandica*. This subspecies migrates to the Mediterranean and Atlantic coasts during winter (LAVERS *et al.*, 2020). Of the two species of auks (*Fratercula arctica* and *Alca torda*), the razorbill is the more coastal during its wintering period in the Mediterranean Sea, alongside the Atlantic Puffin (BEAUBRUN *et al.*, 2013). The European population of razorbills has seen a significant increase throughout its range, particularly in the UK, Sweden, Ireland, and Finland. Iceland still holds the largest population of this bird in Europe, accounting for 41% (BirdLife International, 2022).

The razorbill is a bird that typically inhabits the continental shelf, preferring areas with shallow waters. During the winter season, a substantial population of razorbill birds can be found along the Spanish and French continental shelves, and occasionally even as far as the Gulf of Genoa (CARBONERAS, 1988). Recent research by DE LA CRUZ *et al.* (2022) has demonstrated how some razorbill birds migrate from the Atlantic Ocean through the Strait of Gibraltar into the Mediterranean, and subsequently disperse along the coastlines of other countries, such as France and Spain. Notably, there have been sightings of razorbills in Algeria during November and December of 2022, as well as in more northern and eastern locations like Italy, Malta, Greece, Tunisia, and Libya (BALESTRIERI *et al.*, 2023). In France, the razorbill holds significant cultural and ecological value, being classified as an endangered species in the Red Book (SIORAT & BENTZ, 2005). Similarly, in Spain, auks, including the razorbill, have been granted protected species status since 1981 (CARBONERAS, 1988).

In Italy, the razorbill is a regular passage migrant and winter visitor species. However, only a small number of observations are typically recorded each year, mostly concentrated in the northern-western sector, such as the Ligurian Sea. These observations usually involved single birds or small groups of individuals (BRICHETTI & FRACASSO, 2014).

During the winter season, the razorbill is commonly found in the northern parts of Morocco and occasionally along the Atlantic Sahara (THÉVENOT *et al.*, 2003). In the non breeding period, this species expands its range and can be found in the Mediterranean and along the Atlantic coast of Morocco (NETTLESHIP & SHARPE, 2016). Although not frequently observed, there have been occasional reports of razorbill birds reaching Mauritania (ISENMANN *et al.*, 2010).

In Tunisia, the razorbill is primarily present during the winter season along the coastline. A significant count of 180 individuals was reported on 23rd March 1980 in the Gulf of Tunis (ISENMANN *et al.*, 2005). Notably, recent sightings of the razorbill in Libya and Greece represent the first-ever recorded observations of this species at the national level (BALESTRIERI *et al.*, 2023).

It should be noted that the razorbill is included in the list of bird species concerned by the Agreement on the Conservation of African-Eurasian Migratory Waterbirds (AEWA, 2022).

Currently, limited data concerning the presence of the razorbill in Algeria are available; however, a few recorded recoveries of ringed birds suggest that the species can be found in coastal waters during the winter season (from November to March) (WERNHAM *et al.*, 2002). Observations by JACOB (1983) did not document any razorbill sightings during the winter of 1976-1977. However, the author reported the overwintering of

a small number of individuals along the Algerian coast from 10th November to 16th March 1978 (ISENMANN & MOALI, 2000). In Algeria, *Alca torda* is on the list of protected non-domestic animal species (J.O.R.A., 2012).

In this work, we sought to make a synthesis of the razorbill irruptions that have occurred in Algeria to provide more details about findings along the Algerian coastline than what has been published recently (BALESTRIERI *et al.*, 2023).

## MATERIALS AND METHODS

We conducted a comprehensive search of areas of razorbill irruption as reported in Algeria, with a specific focus on fishing ports and beaches (Fig. 1). To accomplish this, a network of observers consisting of wild life photographers and ornithologists carried out observations along the Algerian coastline. The razorbill survey was conducted through field expeditions in November and December 2022. It is worth noting that the razorbill is typically known to winter offshore (CARBONERAS, 1988; PATERSON, 1997) and only rarely ventures close to the coast.

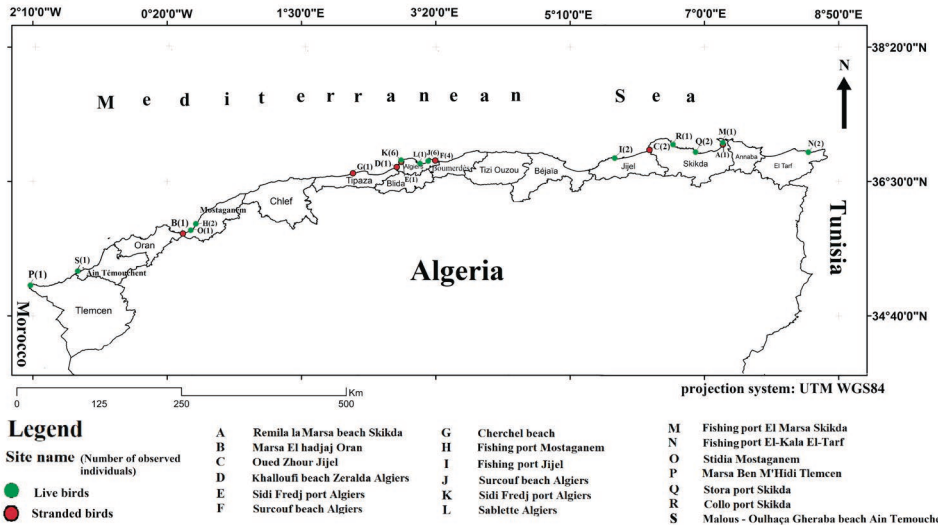


Fig. 1. Location of razorbill *Alca torda* observations on the Algerian coastline.

## RESULTS

During the study period, 32 observations of the razorbill (Tab. 1) were recorded.

These observations were classified into two categories: live individuals sighted within the harbors (Fig. 2 & 3) and carcasses found washed up on the beaches (Fig. 4 & 5). It was observed that the duration of stay for most of the observed razorbill individuals did not exceed seven days.

**Tab. 1.** Summary of observations of the razorbill *Alca torda* in the Algerian coastline (November-December 2022).

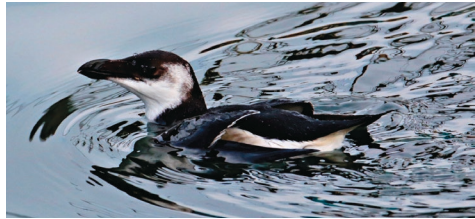
Date of observations	Locations of observations	GPS coordinates	Number of individuals	Condition of the bird
12-Nov-22	Stidia Arzew – Oran	35°50'6.33" N 0° 0'42.66" W	1	Alive
24-Nov-22	Surcouf beach – Aïn Taya Algiers	36°47'19.61" N 3°18'46.37" E	1	Dead
25-Nov-22	Surcouf beach – Aïn Taya Algiers	36°47'37.67" N 3°18'18.94" E	2	Dead
25-Nov-22	Remila beach – La Marsa Skikda	37° 0'14.36" N 7°15'12.18" E	1	Dead
26-Nov-22	Marsa El Hadjaj – Oran	35°47'21.16" N 0° 7'3.88" W	1	Dead
26-Nov-22	Embouchure Oued Zhour – Jijel	36°55'51.49" N 6°15'3.81" E	2	Dead
26-Nov-22	Fishing port, Mostaganen	35°55'23.48" N 0° 3'27.77" E	2	Alive
27-Nov-22	Fishing port, Jijel	36°49'9.46" N 5°46'30.57" E	2	Alive
01-Dec-22	Khalloufi beach – Zeralda Algiers	36°41'48.61" N 2°48'2.88" E	1	Dead
01-Dec-22	Sablette – Algiers	36°44'40.34" N 3° 7'5.79" E	1	Alive
01-Dec-22	Fishing port, El Kala – El Tarf	36°53'59.00" N 8°25'23.72" E	2	Alive
02-Dec-22	Sidi Fredj port – Algiers	36°45'50.55" N 2°50'52.51" E	1	Dead
02-Dec-22	Sidi Fredj port – Algiers	36°45'50.55" N 2°50'52.51" E	6	Alive
02-Dec-22	Surcouf port – Algiers	36°46'45.92" N 3°13'48.39" E	6	Alive
03-Dec-22	Fishing port, El Marsa – Skikda	37° 1'39.65" N 7°15'3.06" E	1	Alive
03-Dec-22	Collo port – Skikda	37° 0'16.04" N 6°34'17.28" E	1	Alive
04-Dec-22	Stora port – Skikda	36°54'5.01" N 6°52'47.39" E	2	Alive
08-Dec-22	Cherchell beach – Tipaza	36°36'41.69" N 2°12'9.38" E	1	Dead
09-Dec.-22	Marsa Ben M'Hidi – Tlemcen	35° 5'11.23" N 2°11'47.38" W	1	Alive
31-Dec.-22	Malous beach – Oulhaça Gheraba Ain Temouchent	35°14'32.3" N 1°34'27.9" W	1	Alive

## DISCUSSION

None of the carcasses of birds observed along the Algerian coastline exhibited any signs of oil contamination or visible injuries. However, determining the exact causes behind this unusual occurrence was challenging. It was plausible that adverse environmental conditions in significant geographical areas along the migratory routes, namely the North Atlantic and the Mediterranean, negatively affected the energy



**Fig. 2.** Razorbill *Alca torda* observed in Sidi Fredj port (Algiers).



**Fig. 3.** Razorbill *Alca torda* observed in El Marsa fishing port (Skikda).



**Fig. 4.** Carcass of razorbill *Alca torda* observed at Khalloufi beach – Zeralda (Algiers).



**Fig. 5.** Carcass of razorbill *Alca torda* observed at Surcouf beach – Ain Taya (Algiers).

expenditure of razorbill populations during their movement period. As a consequence of challenging weather conditions in the North Atlantic, a considerable number of razorbills arrived in the Mediterranean region in a weakened state (BALESTRIERI *et al.*, 2023). Previous studies, such as CLAIRBAUX *et al.* (2021), have reported that intense winter cyclones in the Atlantic could impact the population dynamics of seabirds, particularly their physical condition and survival rates (such as lack of food leading to starvation and subsequent mortality).

The occurrence of deceased birds washing up on the Algerian coast was not a recent occurrence and has been previously documented. HEIM DE BALSAC & MAYAUD (1962) reported such incidents on Zembra Island in Tunisia, while AOURIR *et al.* (2016) recorded similar cases on the Atlantic coast of Morocco, specifically Tamri beach, Blanche beach, and the southwest of the mouth of Oued Bou Issafène. However, the significance of the available observations has been enhanced by the utilization of social media platforms (such as Facebook, TikTok, and Instagram) and the existence of a network of wildlife photographers across Algeria. These platforms and the collaborative efforts of wildlife photographers have facilitated the collection of a substantial amount of information regarding this phenomenon.

In addition, the razorbill's presence in fishing ports can be attributed to the shallow waters found in these areas, along with the abundance of fish, especially small fry, which are easily preyed upon by this species. These fish serve as a primary food source for the razorbill (PASQUET, 1988). Similarly, in Italy, the majority of sightings have occurred along the coastline, particularly within ports. These observations mainly involved young and remarkably approachable individuals actively foraging for food, indicating a possible scarcity of food resources or suboptimal conditions (BALESTRIERI *et al.*, 2023).



In this particular context, the availability of publicly accessible data on the presence of razorbill in Algeria during 2022 has enabled real-time data collection, which is a significant milestone. These data have been further supported by the validation and confirmation of expert researchers, highlighting the impact of wintering razorbill individuals along the coastal regions of Algeria, Tunisia, and even Libya. The emergence of citizen science initiatives in North African countries has gradually started contributing to the gathering of valuable information, thus reinforcing the observations made by CHAMBERLAIN (2018).

## CONCLUSION

In conclusion, it is crucial to emphasize the significance of utilising social media platforms for biomonitoring purposes. These platforms have the potential to gather extensive data on biodiversity, species distribution, and patterns of biogeographical changes on a large scale. However, it is essential to ensure that the data collected through social media undergoes scientific validation for accuracy and reliability (RAMELI et al., 2020; BALESTRIERI et al., 2023).

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