

FIRST OBSERVATION OF LESSER CRESTED TERN (*THALASSEUS BENGALENSIS*) IN LIGURIA (NORTHWEST ITALY).LUDOVICO FRANCESCO ZUCCA^{1*}, DAVIDE ASCHERI¹, ELENA FONTANESI¹,
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ABSTRACT

This work reports an observation of Lesser Crested Tern (*Thalasseus bengalensis*), documented through photographs collected off the coast of Imperia in August 2024. Following an extensive literature review, this represents the first recorded sighting of the species in the Liguria region, underscoring the importance of opportunistic observations in understanding the phenology of both regular and rare seabird species. Furthermore, this work reviews the distribution of the Lesser Crested Tern, with an emphasis on breeding events and observational records across Europe, particularly in Italy.

Key-words: opportunistic survey, seabird, marine environment, Mediterranean Sea, *Laridae*.

SHORT NOTE

The Lesser Crested Tern (*Thalasseus bengalensis*; Lesson, 1821) is a partially migratory seabird belonging to the *Laridae* family. Its global population is estimated at approximately 225,000 pairs (Hamza et al., 2012), and is unevenly distributed across the southwest Pacific Ocean, northern Australia, the Indian Ocean, the Persian Gulf, the Red Sea, the Mediterranean Basin, and northwest Africa (Gochfeld et al., 2020). Due to its broad distribution, large population size, and stable population trend, the Lesser Crested Tern is classified as "least concern" on the IUCN Red List of Threatened Species (BirdLife International, 2018).

Three subspecies of *T. bengalensis* are currently recognised worldwide: *T. b. bengalensis*, *T. b. torresii*, and *T. b. emigratus* (Gochfeld et al., 2020). The latter is endemic to the Mediterranean Sea, where it breeds in Summer, exclusively in Libya, on a saltmarsh lagoon and on two small islands off the coast (Hamza et al., 2016). Unlike the other subspecies, which are only partial migrants (Brichetti & Fracasso, 2006), *T. b. emigratus* performs regular migrations towards the western coast of Africa, often staging on the southernmost coast of Spain, near Gibraltar (Hamza et al., 2016). Given the vulnerability of its breeding and wintering sites, coupled with minimal protection and conservation efforts, this subspecies has been classified as endangered under the Mediterranean Action Plan for Seabirds (UNEP-MAP-RAC/SPA, 2003).

The population of *T. b. emigratus* in the Mediterranean basin is estimated at around 2,400 breeding pairs, alongside an additional 500 breeding pairs of the nominate subspecies *T. b. bengalensis* distributed across the Red Sea, which are considered transitional to the Mediterranean Sea (Hamza et al., 2012).

Between the 1970s and early 2000s, several pairs of *T. b. emigratus* occasionally bred across Europe, including Spain, Italy, Greece, France, and even as far north as the UK (Keller et

al., 2020). In nearly every case, Lesser Crested Terns were observed in colonies of Sandwich Terns (*Thalasseus sandvicensis*), often forming mixed pairs comprising individuals of both species (Scarton et al., 2000). This phenomenon was documented in the northwest Mediterranean Sea, specifically in the Camargue region of France, where between 1959 and 1992, *T. bengalensis* was sporadically observed nesting, including evidence of a potential hybridisation with *T. sandvicensis* (Bonaccorsi, 2009).

In Italy, *T. bengalensis* was first recorded nesting in the Comacchio Valley in 1985, with recurring breeding events documented until at least 2002 (Brichetti & Foschi, 1986; Brichetti & Fracasso, 2006). However, in 1999, breeding did not occur in the Comacchio Valley but was instead observed in the Venice Lagoon (Scarton et al., 2000). Breeding attempts in Europe ceased during the 2000s, with the last recorded event, at Banc d'Arguin, in the Bay of Biscay, in 2006 and in Spain's Ebro Delta in 2003 (Keller et al., 2020). As a result, Libya is currently home to the only breeding colony in the Mediterranean (Hamza et al., 2016).

According to the CISO-COI list of Italy's birds, updated to 2019 (Baccetti et al., 2021), *T. bengalensis* is classified as a regular migratory and an occasional breeder in the country. The first sightings of *T. bengalensis* in Italy were recorded in 1833 and 1839 in Sicily (Brichetti & Foschi, 1987). Since 1982, observations have become more frequent across the central and northern Tyrrhenian Sea, particularly in eastern Sicily and Tuscany, as well as in the Adriatic Sea, with the majority recorded in Emilia-Romagna (Brichetti & Fracasso, 2018). Most of these records occur in Summer, peaking in July and August, likely due to individuals moving from Libyan colonies (Brichetti & Fracasso, 2018).

According to the most recent regional bird checklists of northern Italy, the Lesser Crested Tern is considered accidental in Lombardy (Aletti et al., 2022) and Veneto (Fracasso et al., 2010), while classified as having irregular presence in Emilia-Romagna, with historic nesting, indicating it was once regular but has not occurred in the last ten years (Pavesi et al., 2023). The species remains rare in Friuli-Venezia Giulia and Sardinia (Brichetti & Fracasso, 2018).

On the 13th of August 2024, at 8:30 AM, an individual of Lesser Crested Tern was observed and photographed during a boat-based research survey primarily aimed at collecting data on bottlenose dolphins (*Tursiops truncatus*), with opportunistic data collected on seabirds, sea turtles, and other pelagic marine fauna (Ascheri et al., 2022; Fontanesi et al., 2024). The individual was initially resting on a floating log 5.12 km off the coast of Imperia, Liguria, 32T, 425634.749 east, 4854784.667 north (Figure 1). When slowly approached by the research boat to collect photographic evidence, the bird took off, circled the boat three times, and then returned to the same log. After a short rest, it flew off in a westerly direction.

Accurate species identification was made possible through the photos collected at sea, with valuable input and insights from several experts.

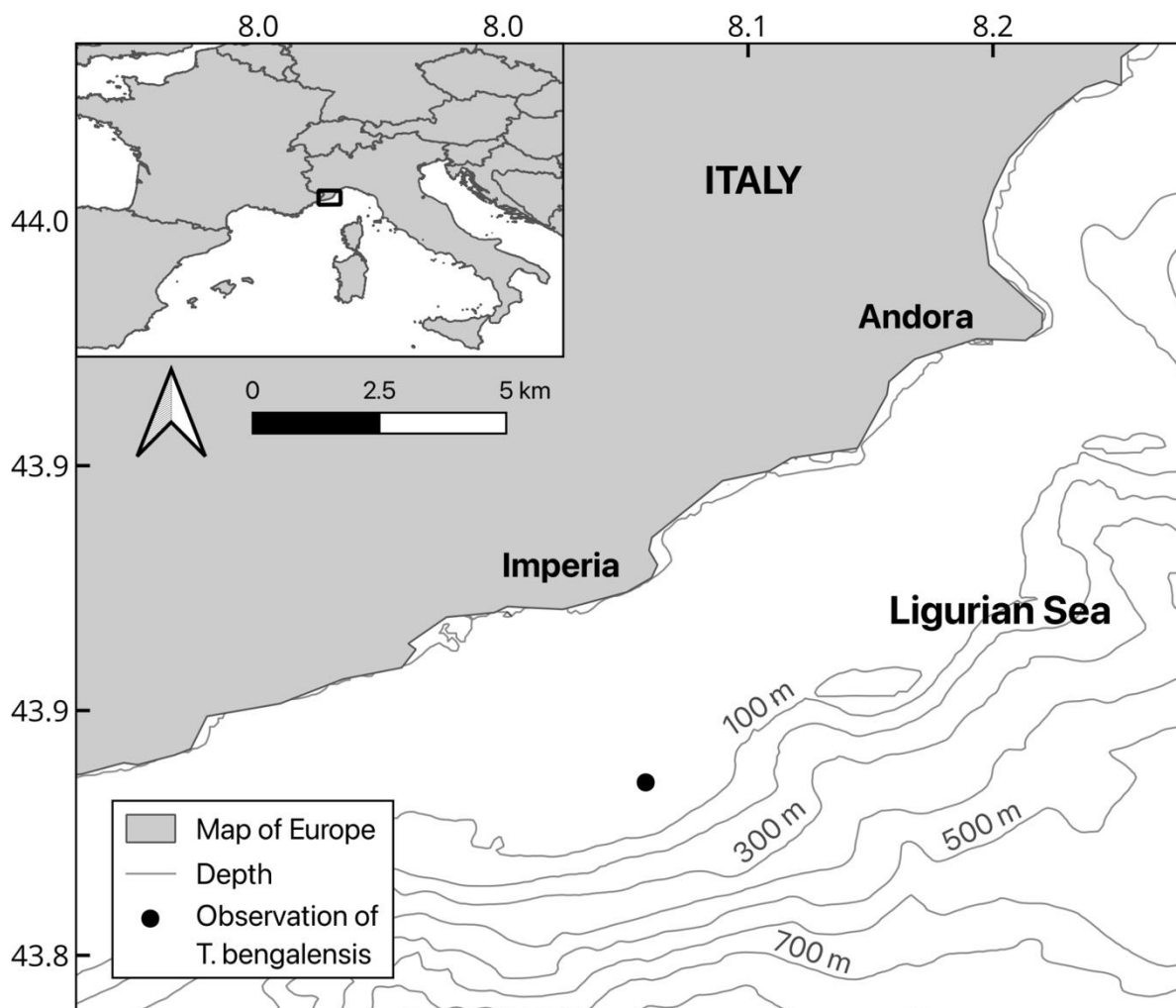


Figure 1. Map of the observation of *Thalasseus bengalensis* made with QGIS 3.30 (CRF, EPSG:4326 - WGS 84).

Field identification of terns is particularly challenging due to the large number of species and their morphological similarities (Brichetti & Foschi, 1987). Although similar in size and appearance to *T. sandvicensis*, the observed individual exhibited a completely yellow-orange bill, while being smaller than a typical Greater Crested Tern (*Thalasseus bergii*) (Figure 2A). Eventually, the grey tail and rump, visible from flight photos, were the definitive characteristics that allowed us to confirm the identification of *T. bengalensis* (Figure 2B).

The individual displayed the typical morphology of an adult, evidenced by the absence of dark patches on the upper side of the wings (Gochfeld et al., 2020).

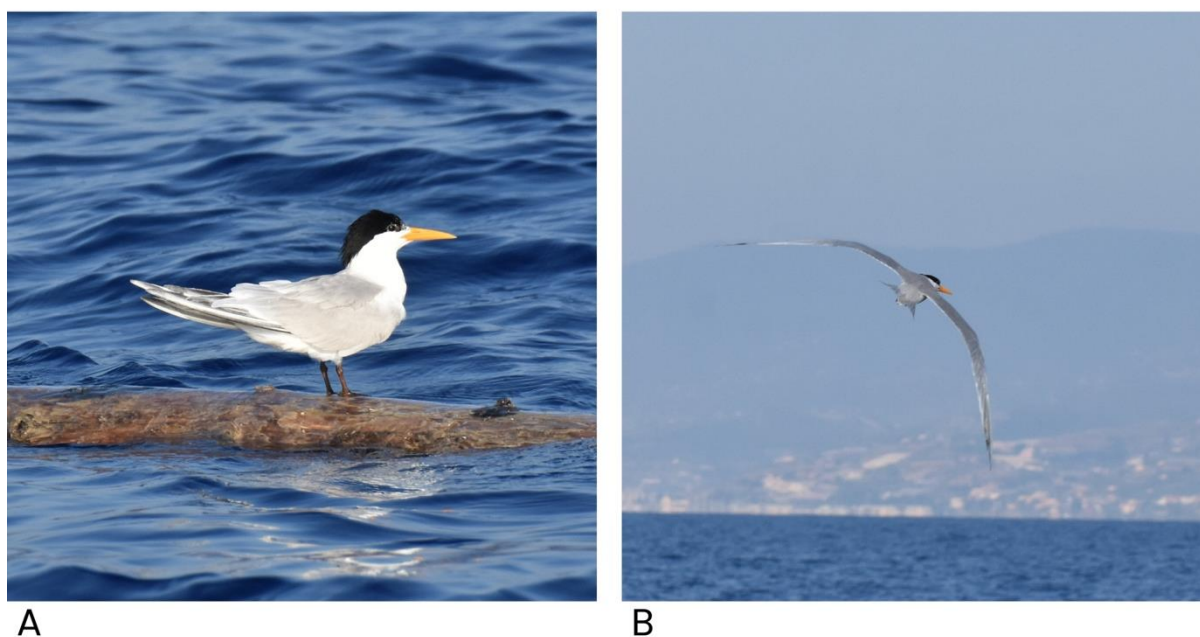


Figure 2. The Lesser Crested Tern, observed on the 13th of August 2024 in front of Imperia. A) stationary; B) flight photo. (Photo: Ludovico Zucca).

According to Baghino et al., (2012), *T. bengalensis* does not appear in the bird checklist of the Ligurian region (NW Italy), updated to December 2010. Additionally, a comprehensive review of the wider literature reveals no prior records of *T. bengalensis* in the region, indicating that this observation may represent the first documented one.

The presence of *T. bengalensis* in Tuscany, in southern France (e.g., in the Camargue and Hyères), in Spain's Ebro Delta (Brichetti & Foschi, 1987; Brichetti & Fracasso, 2018), and, until 2008, in the eastern Pyrenees, Maritime Alps, and on Corsica Island (Bonaccorsi G., 2009), suggests that its occurrence in the Ligurian Sea may be likely more common, particularly during its dispersal movements.

This new observation underscores the value of collecting seabird data through opportunistic platforms during research activities. Seabird observations are crucial for improving our understanding of the phenology of regularly occurring species in the region, as well as for documenting rare and accidental ones (Carta et al., 2021). Moreover, photographic evidence is pivotal for accurate species identification, providing a more precise understanding of species distribution and occurrence, while clarifying morphological distinctions across similar species.

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