Short Communication

The Indian Silverbill *Euodice malabarica*: a new exotic breeding species for the Italian avifauna?

Enrico Carta[1,2*], Elan Federico Zucchetti[3], Rudy Valfiorito[1], Niccolò Alberti[1]

Abstract - The first confirmed breeding case of the Indian Silverbill Euodice malabarica in Italy is reported. We also report the new Italian records and the implications for the expansion of the species from southern France, where the species has been naturalized since the 80s.

Key words: invasive species, Liguria, first breeding case, Estrildidae.

Riassunto - Il Becco d'argento indiano, *Euodice malabarica*: una nuova specie esotica nidificante per l'avifauna italiana?
Viene riportato il primo caso di nidificazione di becco d'argento indiano *Euodice malabarica* in Italia. Riportiamo inoltre le altre osservazioni italiane e le implicazioni dell'espansione della specie dal Sud della Francia, dove è naturalizzata dagli anni '80.

Parole chiave: specie alloctone, Liguria, prima nidificazione, Estrildidae.

The Indian Silverbill *Euodice malabarica* (Linnaeus, 1758) is a monotypic species of the Estrildidae family. The species occupies a wide variety of habitats, such as open country, semi-desert and scrub, open dry woodland, cultivated areas, and towns and villages (Payne, 2020).

The species' native range encompasses parts of the Arabian Peninsula, through to South Asia, India, and Sri Lanka. The species' conservation status is considered as "Least Concern" according to the International Union for Conservation of Nature Red List (Birdlife International, 2018).

Several naturalized populations are reported from many parts of the world, like western Arabia, Bahrain, Jordan, Puerto Rico, and the Hawaiian Islands (Berger, 1975; Meadows, 1994; Lever, 2005; Khoury *et al.*, 2012; Birdlife International, 2018; Payne, 2020). The only naturalized population in Europe is in southern France, where it was first recorded in Nice in 1988 when around 20 individuals were observed at the Jardin Botanique de la Corniche Fleurie (Dubois, 2007).

The species' presence in Nice increased to 20-30 breeding pairs in the 1990s, and it subsequently spread through the Var Valley (Lever, 2005; Dubois, 2007; Keller *et al.*, 2020). In the 2000s, the presence of the Indian Silverbill was known from Antibes and Biot to the west, to Lucerame in the north, about 25 km away from Nice. By that time, the total size of the population was estimated at a few hundred individuals (Pascal, 2003; Dubois, 2007), and in 2020, it was estimated to be about 1000 individuals (Keller *et al.*, 2020). The impact of the Indian Silverbill on the natural ecosystem of southern France is not documented (Pascal, 2003).

The French population has been expanding westwards, with individuals reaching Toulon (Keller *et al.*, 2020), while in the eastern part of its French range, some extralimital observations from the main population, obtained through citizen science data, are known from Menton, close to the Italian border (21st March 2019, 2 individuals, Lucie Zoppi on faune-paca, and 24th January 2023, 5 individuals, Christophe Baudoin on faune-paca; latest access on 19th November 2024), confirming an expansion towards the east.

Fig. 1 shows the distribution of the species in southern France, considering the total number of records as background color, and the French nesting sites (yellow points), considering just records with newly fledged juveniles, obtained from faune-paca.org (latest access on the 10th November 2024). The presence in southern France is concentrated in the Departments closest to Italy. The map also includes the new Italian records, which we will discuss later in the article.

We report on further data supporting the eastwards expansion and suggesting the colonization of Italy, from October 2022, in different localities of the Ligurian shoreline. Most sightings were recorded in the western part of the region, mostly in Sanremo, Taggia, and Imperia, though there is a single record from the La Spezia area. The record in Ameglia (SP) is still up for debate. There are no records from Albissola to Ameglia, a gap of more than 140 km, therefore, it cannot be ruled out that these are 2 escaped

[1]ROL Rete Osservatori Liguri odv, Genoa, Italy.
[2]Department of Biology, University of Padua, Italy.
[3]Lesegno (CN), Italy.

* Corresponding author: enrico94@outlook.it

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cagebirds, although it can also be due to the lack of observers in the eastern part of the region. If they are indeed 2 individuals who arrived from France, it would be concerning how quickly they reached the opposite side of the region.

It is interesting to underline that most of the Italian records (12 out of 16) are in Autumn, suggesting dispersal movement right after the breeding season, or possibly a more widespread occurrence of the species as a breeder in the Italian territory. Most of the records (12 out of 16) are confirmed by photos. Regarding the remaining sightings, the one in Ventimiglia is considered reliable because it is close to the French population. The observations in Albissola, not supported by photos, probably need further investigation to be confirmed.

All the Italian records of the Indian Silverbill *Euodice malabarica* are reported below:

- 23/10/2023 Mouth of the Argentina stream (Taggia, IM), 1 individual, observed and photographed by Luigi Giunta
- 03/02/2023 Mouth of the Argentina stream (Taggia, IM), 7 individuals, observed and photographed by Luigi Giunta
- 09/09/2023 Albissola marina (SV), 1 individual, observed by Marco Tortarolo
- 22/09/2023 Urban Park of Imperia (IM), 2 individuals, observed and photographed by Luigi Giunta
- 21/10/2023 Sanremo (IM), 1 individual, a juvenile still incapable of long-distance flight, observed and photographed by Tiziana Ascheri
- 27/10/2023 Albissola Marina (SV), 1 individual, observed by Marco Tortarolo
- 31/10/2023 Urban Park of Imperia (IM), 8 individuals, observed and photographed by Silvano Gazzano & Gian Pietro Pittaluga
- 01/11/2023 Mouth of the Argentina stream (Taggia, IM), 2 individuals, observed and photographed by Luigi Giunta
- 04/11/2023 Bocca di Magra (Ameglia, SP), 2 individuals, observed and photographed by Francesco Marescotti
- 06/11/2023 Sanremo (IM), 10 individuals, observed and photographed by Gina Grandi
- 06/01/2024 Ventimiglia (IM), 4 individuals, observed by Alberto Cosso
- 31/03/2024 Albisola Superiore (SV), 1 individual, observed by Marco Tortarolo
- 25/06/2024 Sanremo (IM), 1 individual, found injured by Roberta Sartini, later died and now preserved at the Museum of Natural History of Genoa "G. Doria"
- 29/09/2024 Urban Park of Imperia (IM), 1 individual observed and photographed by Giorgio de Andreis
- 25/10/2024 Sanremo (IM), 4 individuals, 2 adults, and 2 newly fledged juveniles, observed and photographed by Enrico Carta and Rudy Valfiorito
- 15/11/2024 Sanremo (IM), 4 individuals, observed and photographed by Luigi Giunta

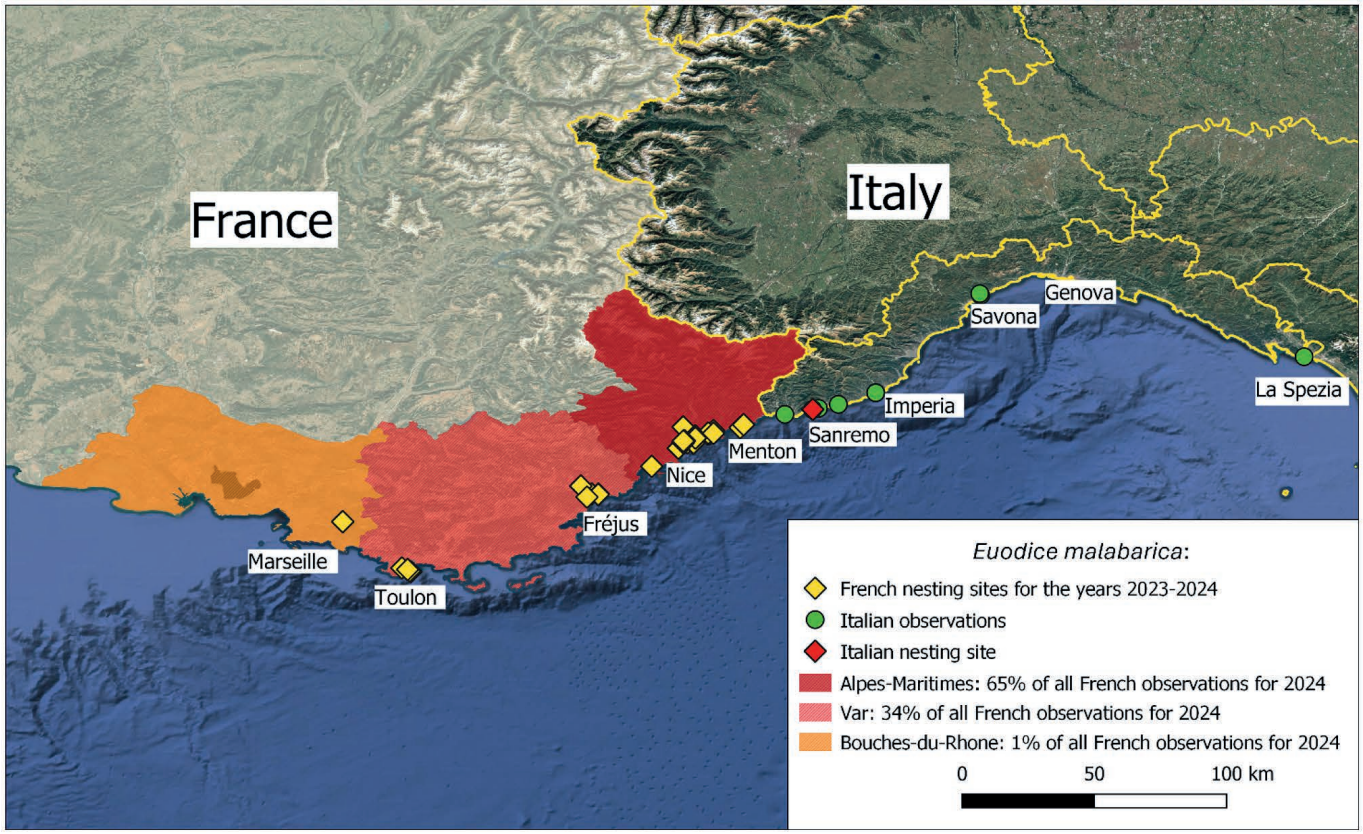

Fig. 1 – New italian sightings and nesting case, and synthesis of the current presence of Euodice malabarica in southern France, with records obtained from the citizen science faune-paca.org. Base map: Google Earth. / Caso di nidificazione e nuove osservazioni italiane, e sintesi dell'attuale presenza di Euodice malabarica nel sud della Francia, con dati ottenuti dal portale di citizen science faune-paca.org. Mappa: Google Earth.

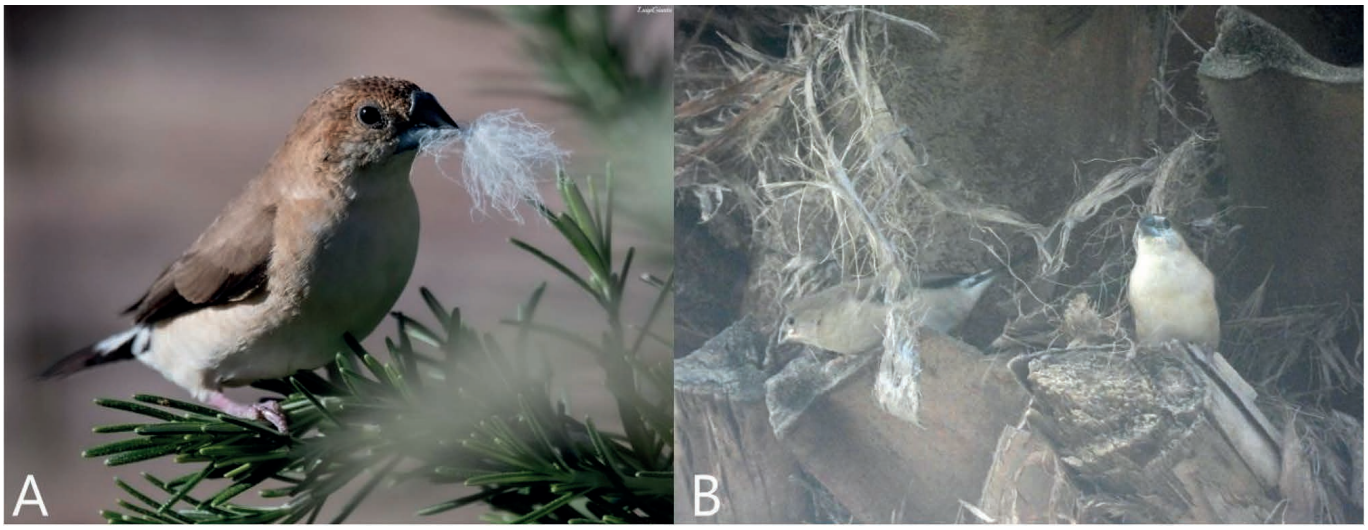

Fig. 2 – A) Adult Indian Silverbill in Sanremo, probably carrying nesting material, photo by Luigi Giunta; B) adult and recently fledged juvenile in Sanremo, photo by Enrico Carta. / A) Adulto di becco d'argento indiano a Sanremo, mentre trasporta probabile materiale per il nido, foto di Luigi Giunta; B) adulto e giovane da poco involato a Sanremo, foto di Enrico Carta.

The first Italian breeding case occurred in Sanremo (43.80876 7.743773; 90 m asl; IM), where a juvenile still incapable of long-distance flight was observed on the 21st of October 2023 by Tiziana Ascheri. One year later, we confirmed that nesting activity occurred in the same place: on the 25th of October 2024, two of us (Enrico Carta and Rudy Valfiorito) observed 4 individuals, 2 adults and 2 recently fledged juveniles.

The adults were easy to observe and also responded actively to playback, showing territorial behavior. The 2 juveniles, recognizable from the small beak and a yellow spot on the side of the beak (Fig. 2), were moving close to a natural cavity on a Mexican fan palm trunk *Washingtonia robusta*, at around 4 m from the ground, begging for food from the adults. Juveniles never left the proximity of the natural cavity, going inside it and on its edge, while the adults were flying in the vegetation nearby. The nesting site was located in a very anthropized area, in an urban environment with houses, exotic plants, like the aforementioned Mexican fan palm, and a hedgerow of *Pittosporum* sp., with patches of uncultivated Mediterranean vegetation nearby.

Both nesting events were recorded in Autumn, in a similar fashion to the behavior of the species in parts of its natural distribution: in the Indian subcontinent for example it breeds in winter months (Payne, 2020), while nesting activity has been recorded from March to as late as November in the Jordan Valley, indicating a prolonged breeding season contributing to high reproductive and invasive abilities. In this region, the spatial pattern of the invasion seems to be in all directions (Khoury *et al.*, 2012). Though the species is usually described as resident in its native range, with some local movements due to rainfall (Payne, 2020), it seems that some populations, both native and introduced, are indeed expanding, as is the case in Bahrain (Lever, 2005).

It is also known that the species nests in different plants, such as date palms (Meadows, 1994; Payne, 2020). Some feral populations also breed in an anthropized context, like in southern France and western Arabia (Meadows, 1994; Lever, 2005; Dubois, 2007).

Up until now, the Indian Silverbill was not included in the Italian checklists (Brichetti & Fracasso, 2015; Baccetti *et al*., 2021). The records reported in this work should be the first related to a naturalized population in the Italian territory and should satisfy the requirements for the species to be included in the AERC Category C, according to Baccetti *et al.* (2021), who followed the categorization suggested by the "Association of European Records and Rarities Committees".

It will be interesting to keep monitoring the situation of the nest in Sanremo, i) to better understand the size of the population, ii) to understand the precise reproductive phenology of the species, and iii) to collect more data about the effective increase and expansion of the Indian Silverbill in north-western Italy.

Furthermore, the Indian Silverbill could also be favored by climate change, as has also been seen in other bird species originally from tropical or subtropical habitats (Naimi *et al.*, 2022). Warmer springs and autumns may have influenced the reproductive success of the species, possibly favoring dispersal movements over longer distances. Also, the fact that the Indian Silverbill inhabits human-altered environments can be an important factor in its success and spreading (González-Lagos *et al.*, 2021). It is important to develop future research on the expansion of the species, also considering these aspects, and our work, which reports the first Italian records, could be a useful base for future studies.

Note from the authors. When our short communication was ready to be published, two additional observations of the species were recorded: at least 25 individuals (including a recently fledged juvenile) in Sanremo on the 14th of December 2024 (L. Giunta), a record that represents the maximum number of individuals in Italy; on the same day, 3 individuals were recorded in Pisa (M. Lenti on ebird.org). Although it cannot be ruled out that these 3 individuals escaped from captivity, this would be the first Italian record outside of Liguria. Both records are supported by photos

and may confirm the eastward expansion of the species that we describe in our work.

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