

## Introduction

The 6-year LIFE22-NAT-EL-LIFE MareNatura project (2023-2029) wants to enrich our knowledge on the ecology of 5 EU priority species of seabirds in Greece. One of the target species, Scopoli's shearwater (*Calonectris diomedea*), is a long-lived pelagic seabird with delayed maturity and low annual reproductive rate. During its breeding cycle, the species cover long distances to its foraging grounds adopting a dual foraging strategy in some Mediterranean colonies (Cecere et al., 2013). It is also a good indicator of organic contamination and pollution by microplastics (MPs) in its habitat. The aim of this research is to enlighten our knowledge on the foraging ecology of Scopoli's shearwater and the impact of environmental factors on the species breeding ecology in the Greek Seas.

## Material and methods

There are four significant breeding sites known in Greece for Scopoli's shearwater, two in Eastern Crete (Paximada and Anavatis islets) and two in the South and Northern Ionian Sea (Strofades island group and Tracheia islet respectively) (Fig.1).

During current year, two annual visits were organized for the Greek largest colony on Strofades island group (Karris et al., 2017) identifying active nests (mid June 2024, incubation period) and examining their hatching success (end of July 2024, post-hatching period). Additionally, one visit was conducted to the rest of the colonies for tagging purposes. Adult birds were ringed and tagged with GPS-GSM transmitters aiming to identify their feeding grounds. Ectoparasites and blood samples for hemoparasites' identification were collected as well as feather and blood serum samples for organic and inorganic pollutants determination. Feathers and faeces were also taken for examining microplastics ingestion.



Figure 1. The four target colonies of Scopoli's Shearwater in Greece.

## Future steps

- Tag fledglings with GPS-GSM transmitters for examining the different movement patterns of adult and immature birds.
- Identify foraging grounds of the different colonies and assess the adoption of the dual foraging strategy for the Greek colonies.
- Combine telemetry data with biotic and abiotic parameters for modelling spatial distribution pattern of the species.
- Analyse blood samples for sex identification and endoparasites as well as faeces for microplastic contamination.

## Results

At Stamfani islet (Strofades island group) 45 nests were monitored during the first visit while 26 of them were still occupied at the second visit. In total, 30 adult birds were ringed/sampled while 4 of them were tagged with GPS-GSM transmitters (Fig. 2). At the rest of the colonies, 8 adult birds were ringed and tagged in total. From all colonies, blood samples were taken to identify the sex of the individuals and to be analysed for blood parasites. Primary feathers, faeces and ectoparasites were also collected for different aims/analyses.

The tagged birds are still monitored during the post-hatching period and the collected telemetry data will contribute to identify core foraging areas of Scopoli's Shearwater in Greece and the neighboring countries (Fig.3).



Figure 2. Deployment of GPS-GSM tag on Scopoli's shearwater (July 2024).

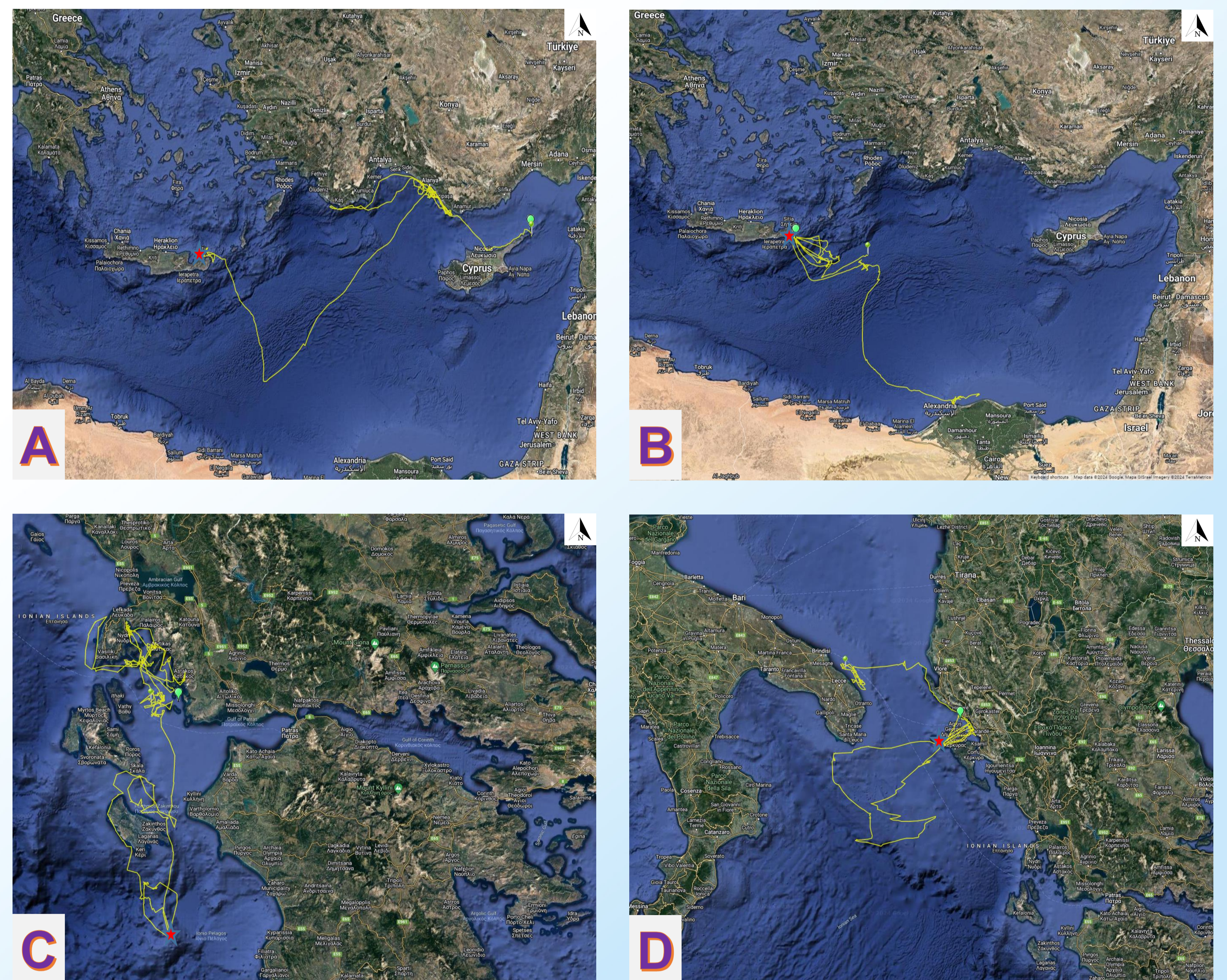


Figure 3. Foraging movements of Scopoli's shearwaters originating from (A) Paximada islet, (B) Anavatis islet, (C), Stamfani islet of Strofades island group and (D) Tracheia islet during late July – early August 2024. Red stars indicate the location of colonies.

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## References

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