

Movement ecology of Eleonora's falcon at its breeding grounds:
revealing foraging patterns and identifying threats with the use of GPS
telemetry

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Eleonora's falcon (*Falco eleonora* Gén , 1839) is a transequatorial, long-distance migratory raptor, well-known for its delayed breeding period. Own to its great dispersal ability, especially so during the prebreeding period, detailed information on its distribution pattern is currently lacking. In this study we aimed at revealing the daily activity pattern of falcons originating from the core of its breeding population, namely the Aegean Sea, and ultimately identifying current pressures and potential threats. Based on GPS data of high spatiotemporal resolution from 2015 to 2018 we identified foraging areas visited during the prebreeding period and assessed the species' habitat preferences in these areas. We also investigated spatiotemporal patterns in the species' foraging activity during the breeding period. Our results indicated that until the onset of the breeding period the species visits insect-rich areas in the mainland lying several (even hundreds of) kilometers away of breeding colonies, whereas later on the species' movements are restricted in the vicinity of the breeding colonies. While important pressures were not identified within its prebreeding foraging areas, the predicted increased intensity and severity of wildfires as a result of climate change could challenge the quality of the species' foraging habitats. Additionally, offshore wind farms are considered an important threat given that the species' breeding colonies and its foraging range during the breeding period overlap with areas of high wind potential in the Aegean Sea. Consequently, future conservation schemes for Eleonora's falcon are encouraged to incorporate measured designed to tackle the anticipated threats.

Keywords: *Falco eleonora*, foraging grounds, wildfires, wind farms, climate change, Aegean Sea