



UNIVERSITY OF CYPRUS
DEPARTMENT OF BIOLOGICAL SCIENCES

The Department of Biological Sciences cordially invites you to the thesis defense
of the PhD candidate

Thomas Hadjikyriacou
(Dr. Alexander Kirschel Research Laboratory)

entitled

**“Breeding success, wintering ecology and migratory behaviour
of Eleonora’s falcon (*Falco eleonora* Gén , 1839)”**

Abstract

Eleonora’s falcon (*Falco eleonora*) is a migratory bird of prey that breeds almost exclusively in the Mediterranean while spending the winter months primarily in Madagascar. Knowledge on its wintering grounds has been recently enhanced through the use of satellite telemetry, with which its migratory routes were revealed as well, but still, factors that affect migratory strategy and habitat usage both during migration and wintering are not well understood. Cyprus is the eastern limit of its breeding distribution, where it was thought to exhibit the lowest of breeding success rates, in contrast to the western limit, the Canary Islands, where breeding success was estimated to be three times greater. New technology and methods, presently allow the monitoring of the movement ecology of this medium-sized raptor in great spatiotemporal detail and an array of techniques are available for the study of its breeding ecology. In this work, I examined the year-round ecology of the species, at its breeding grounds, along migratory routes and in wintering areas.

In Cyprus, I used a diversity of methods with the incorporation of ground, aerial and boat surveys using photography, photogrammetry and GIS as tools for the estimation of the breeding success of Eleonora’s falcon and for the assessment of nest site availability and the effect of nest site physical characteristics on breeding success. I found that breeding success is at the same level as at the core of its distribution, i.e. in the Aegean Sea and that the population is stable with regards to number of pairs. Using camera traps in nests, I confirmed for the first time between-nests intraspecific predation, witnessing a female feeding her nestlings with a nestling taken alive presumably from a nearby nest. Though such behaviour is rarely witnessed, it could be a common

phenomenon in this colonial raptor whose frequency might be affected by fluctuations in breeding density and food availability.

Using solar-powered GPS-accuracy transmitters for the first time on this medium-sized raptor I identified the migratory movements of Eleonora's falcon breeding in Cyprus. Relating the speed of travel with the vegetative cover along the routes, during day and night, I identified a preference, especially in autumn, for migration through vegetation-rich areas where tracked individuals flew with lower speeds during daytime, indicating fly-and-forage activity. Birds roosted during most nights, and added stopovers at selected sites before or after crossing ecological barriers. By contrast, they overflow unsuitable habitats at fast speeds both during the day and at night. Combining data from tracked individuals from Cyprus Greece, I identified that upon arrival at the wintering grounds, the Eleonora's falcons first remained in relatively open habitat types at lower elevations. During the second half of the wintering season and well into the rainy season, they progressively moved towards areas at higher elevation covered with humid forest, utilizing food abundance in a suitable pattern geographically and temporally. Time budgets based on data obtained at an hourly rate revealed that falcon were inactive, resting or roosting, more than 80 % of their time, while forage takes just about 15 % of their daily time budget, and occurs almost exclusively during daytime.

Thursday, May 24, 2018 at 10:00
Building ΘΕΕ02, Room B128 (Panepistimioupoli Campus)

The presentation is open to the public.