

Monitoring of a *Canis aureus* population living in the airport area of Samos Island, Greece

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1. Introduction

The Golden Jackal (*Canis aureus*, Fig. 1) population inhabiting the area of Samos International Airport "Aristarchos of Samos", Greece, and the surrounding area has been confirmed as a **potential risk for flight safety** during the past years^{1,2}. An exclusion process from the airport installations and runways was initiated as a priority measure taking into account the **welfare and conservation** of this population.



Fig. 1: *C. aureus* illustration.

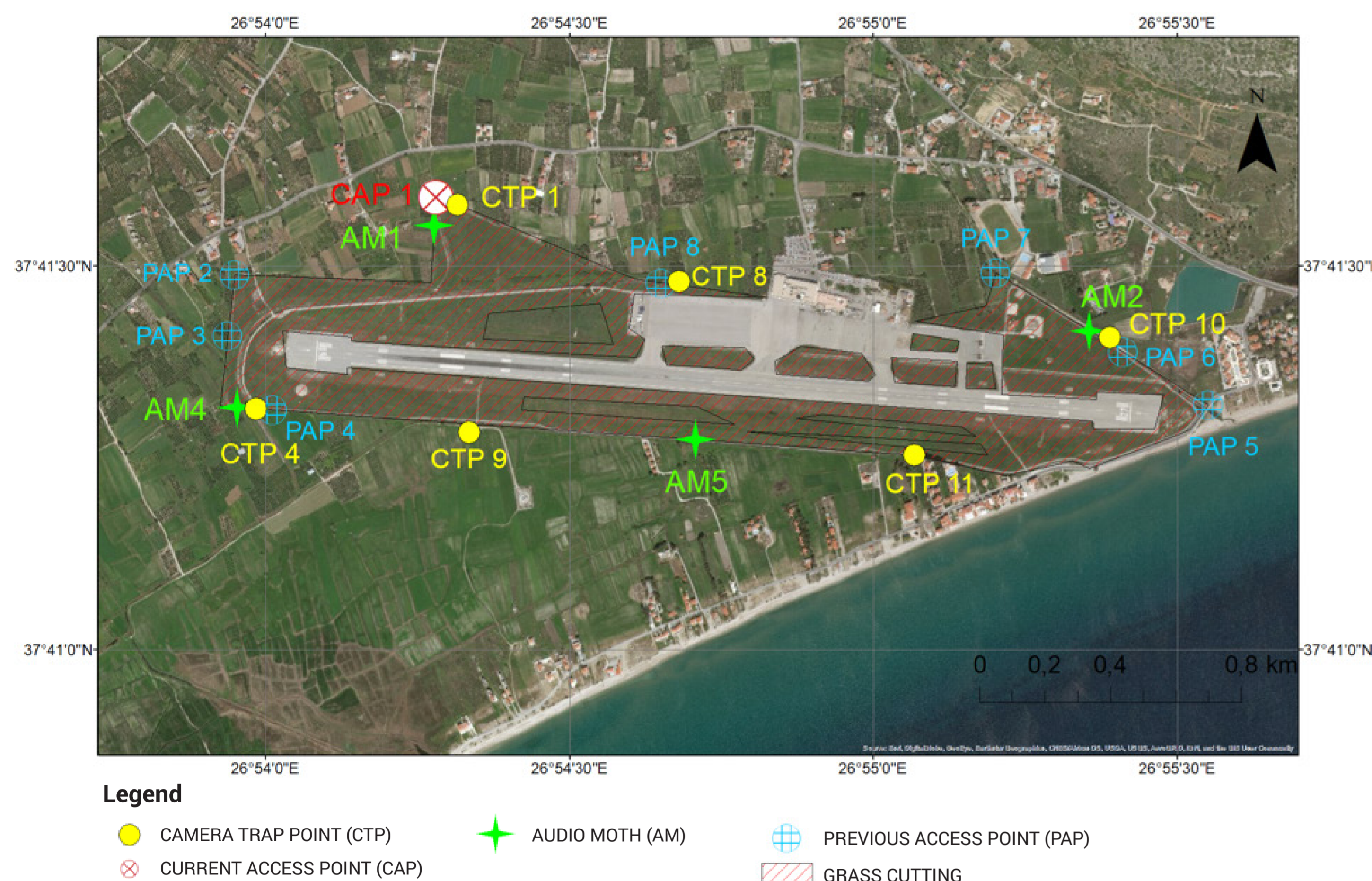


Fig. 2: Map of Samos International Airport "Aristarchos of Samos", Greece.

3. Results

A total of 8 hours of sightings was recorded, considering an average duration of 5 seconds per sighting (Fig. 3, Fig. 4). The records showed the constant movements of the jackals through the access points during all the year, with **peak activities between 11:00 p.m. and 4:00 a.m.**

Jackals' dens were located during the herding attempt.

The monitoring of CTP1 and acoustic data proved the **continued presence within the airport**, with evidence of juveniles during the breeding season. 6 to 8 jackals are estimated within the airport area.



Fig. 4: Frame from CTP1 at 08:10 on 24/01/2018.

5. Conclusion

This study provides an insight into the jackal's spatio-temporal use of the Samos Airport area. Further studies need to be conducted in order to fill the knowledge gap on the habitat use and social structure of this species. **As a multi-disciplinary pilot project, this study can be used as a model for airport wildlife management.**

2. Materials & Methods

The study was conducted within the boundaries of the airport (Fig. 2). 8 access points (apertures in the airport fencing), frequently used by the jackals, were identified in 2017 by the presence of tracks, scats and fur hairs, and monitored deploying **camera traps** (Bushnell Trophy Camera 119874C).

In 2018, all installed Camera Trap Points (CTP) were closed except for one where a controlled access gate was placed (CTP1). In March 2018, a **herding** of the jackals out of the airport was attempted.

Post-exclusion monitoring is being carried out in CTP1, CTP4 and CTP10 for a population estimation^{3,4}. **Audio recorders** (Audiomoth 1.0.0, Open Acoustic Devices Inc.) were deployed to extend the monitoring with acoustic data. The vegetation of the airport was reaped in October 2018 to reduce the burrowing, rearing and feeding areas for the jackal population.

A **catch-release study** is planned in order to secure a GPS collar (Lotek Wireless Inc.) on one individual and follow its movements around the habitat surrounding the airport.

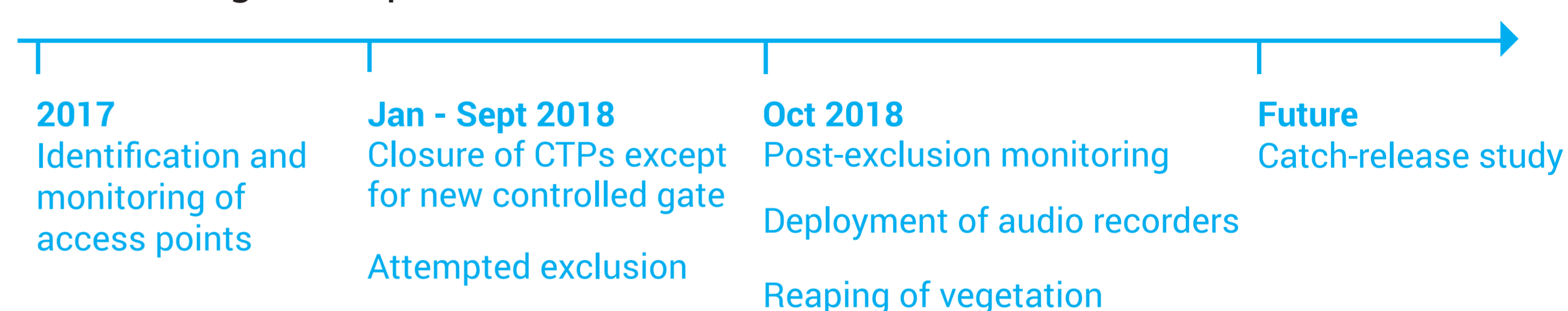


Fig. 3: Frame from CTP3 at 11:32 on 27/02/2018.

4. Discussion

The estimated size of the studied group is in accordance with previous research conducted on Samos island⁵.

The evidence of activities at night allows a better management of the daily operations of the airport. The gradual exclusion plan is a long-term process that comprehends many factors (biological, ecological, managerial). Alteration of the habitat should be considered as an important strategic step. Due to the use of the airport as a breeding area, any wildlife management measure should prioritise the welfare of the species.

Because of the elusive behaviour of the animals, the monitoring with the GPS collar is still in its primary stages of development.

References

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