CANIS PROJECT

Wild canids in a changing Greek landscape

A long-term field research initiative integrating behavioural ecology, new technology, population genetics, spatial monitoring and One Health to understand wolves, golden jackals and other canids living across human-dominated landscapes.



UAVs & THERMAL IMAGING | CAMERA TRAPS | GENETICS | SPATIAL MONITORING | ONE HEALTH

Innovative monitoring with thermal UAVs, camera traps and genetics

SCIENTIFIC COLLABORATION

CANIS PROJECT collaborates, when required, with the Zoology Sector of the School of Biology and the School of Veterinary Medicine, Aristotle University of Thessaloniki, for necropsies, parasitological investigations and genetic analyses.





WHAT WE ASK

01 ***How do wild canids move, feed and coexist in agricultural, mountainous, island and peri-urban landscapes?***

02 ***How do recolonisation, connectivity, dogs and human activities reshape populations and interactions?***

03 ***How can field evidence support monitoring, disease surveillance, conflict prevention and conservation?***

Shared landscapes healthier tomorrows

An innovative field approach

No single method captures the ecology of highly mobile, mostly nocturnal carnivores. CANIS PROJECT combines complementary tools so that behaviour, space use, genetics and health can be interpreted together.

From above to a wider perspective



AERIAL = thermal UAV survey · GROUND = handheld thermal survey

01

Thermal UAV surveys

Night-time detection and real-time following of animals' routes, group composition, feeding, resting and direct interspecific encounters.



02

Camera trapping

Long-term records of presence, activity, shared sites, marking and recurring use of resources across seasons and years.



03

Field surveys

Tracks, scats, dens, marking sites, feeding remains, carcasses and biological material are recorded systematically in the field.



04

Genetic analyses

Samples from wolves and golden jackals support species and individual identification, kinship, connectivity, hybridisation and population structure.



05

Individual marking

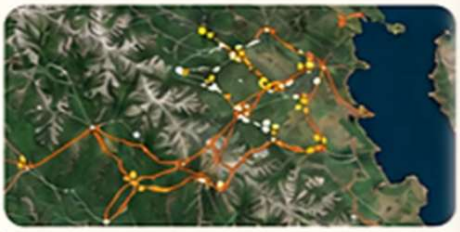
Ear marking and visible individual features can link repeated observations through time and support movement, survival and behaviour studies.



06

Spatial analysis

GIS integrates records from different methods to study distribution, proximity, movement corridors, recolonisation and population connectivity.



THE KEY PRINCIPLE

DIRECT OBSERVATION × LONG-TERM MONITORING × GENETICS

Behaviour seen in real time is interpreted together with repeated site use, biological samples and spatial context — reducing the risk of drawing conclusions from a single line of evidence.

Science for shared landscapes

From individual behaviour to population change



Direct observation allows us to separate actual behaviour from assumptions based only on presence records.

Behaviour & spatial ecology

Movement, group structure, territorial and marking behaviour, resting sites, travel routes and responses to roads, settlements and people.

Wolf–jackal coexistence

Shared space and resources, direct encounters, tolerance, avoidance and competition across established, recolonising and expanding populations.

Recolonisation & connectivity

Range recovery, dispersal, new breeding populations, barriers, corridors and the emergence of new areas of sympatry.

Human–canid interactions

Use of agricultural and peri-urban landscapes, proximity to settlements, anthropogenic foods, habituation and conflict-related behaviour.

Dogs & wild canids

Competition, shared resources, predatory behaviour, direct encounters, hybridisation and pathways of pathogen transmission.

Population genetics

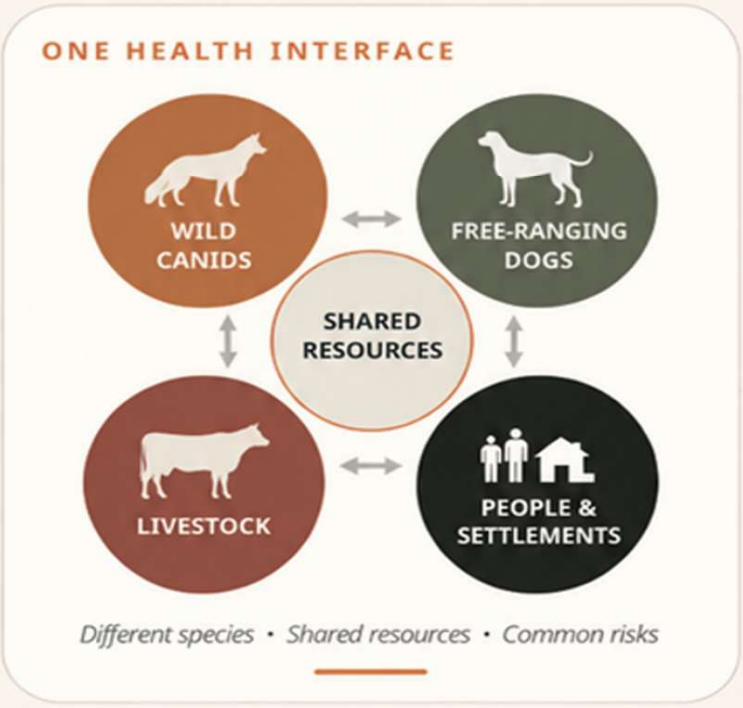
Individual identification, kinship, population structure and connectivity, introgression and the genetic signature of recolonisation.

PRESENCE ≠ SHARED SITE USE ≠ SIMULTANEOUS INTERACTION

Keeping these levels distinct is essential when interpreting coexistence among highly mobile carnivores.

Wildlife, dogs, livestock and people share the same landscape

Agricultural landscapes can concentrate wild canids, free-ranging dogs and livestock around predictable food resources. These interfaces are ecologically important — and can also create pathways for disease transmission.





WHAT WE EXAMINE

Shared feeding sites

Carcass disposal and other food subsidies that repeatedly attract wild canids and dogs.

Disease interfaces

Potential spillover and spillback pathways, mortality events and biological sampling.

Management relevance

Evidence for carcass management, dog management, surveillance and coexistence planning.

FROM FIELD OBSERVATIONS TO CONSERVATION ACTION

Monitoring · early detection · connectivity · conflict prevention · disease surveillance · evidence-based management



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