



## **Propostas de temas de dissertação de mestrado ou estágio curricular/extra-curricular**

**2026**

A SPEA – Sociedade Portuguesa para o Estudo das Aves é uma organização não-governamental de ambiente com uma vocação científica e missão dirigida à conservação das aves e dos seus habitats, com vista ao seu usufruto pelas gerações vindouras. Como organização parceira da BirdLife International em Portugal, é referência ao nível da monitorização e da conservação das aves no país e está presente no continente e nas Regiões Autónomas dos Açores e da Madeira, além de Cabo Verde, São Tomé e Príncipe, e parceira de outras organizações em diversos outros países.

No nosso trabalho contamos com numerosos projetos de monitorização, gerais para as aves do país (como o Censo de Aves Comuns, que estabelece o Índice de Aves Comuns, ou o Atlas de Aves Nidificantes) ou específicos para aves com estatuto de conservação desfavorável (como o priolo, o fura-bardos, a pardela-baleiar, o britango ou o painho-de-monteiro, entre outros). Também nos projetos de conservação, como por exemplo os projetos LIFE desenvolvidos pela SPEA, o trabalho científico é de grande importância para os resultados obtidos, havendo uma forte componente de estudos e de integração de estagiários e estudantes, muitas vezes levando à publicação de teses de licenciatura, de mestrado ou de doutoramento que têm contribuído para a formação de vários investigadores no país e no estrangeiro.

Para além dos estágios na área da ornitologia e mais científicos, existem necessidades também nas áreas de educação ambiental, comunicação e turismo ornitológico.

Nesse sentido, vimos divulgar aos estudantes e às universidades e escolas do país uma lista de oportunidades de trabalho científico que pode contribuir para a formação em Ornitologia e outras áreas de investigação. A maior parte das propostas aqui apresentadas constituem oportunidades e ideias que identificamos como prioritárias no ano corrente em termos da importância atual da área de investigação como indicação para os interessados; mas em alguns casos podemos apoiar e orientar os trabalhos propostos, ceder os dados dos nossos projetos para as teses ou até integrá-los em projetos em curso. Note-se, no entanto, que nenhum destes estágios é remunerado ou integrável em programas de estágios profissionais participados.

Em geral, os nossos projetos oferecem oportunidades de complementar estudos e ações de conservação, com dados consistentes, para um melhor aproveitamento pela parte de estudantes e investigadores. Convidamos as escolas superiores e as universidades a divulgar estas oportunidades aos seus estudantes, e todos os interessados em realizar trabalho de investigação a considerar os temas abaixo propostos e a contactar a SPEA (através dos contactos indicados em cada proposta) para o efeito.

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## Proposta 1



Little terns @Maria Ruíz

### 1. Identification of the supervisor

- a. **Name:** Nuno Oliveira (Marine Conservation Department)
- b. **E-mail:** nuno.oliveira@spea.pt

### 2. Brief description

- a. **Proposed title:** **Assessing productivity, chick mortality and other parameters of breeding seabirds in Ria Formosa, Algarve**
- b. **Main objective:** To assess productivity, chick mortality, clutch size and failure reasons of one or two species of seabirds, Audouin's Gull *Larus audouinii* and Little Tern *Sternula albifrons*, that breed in Ria Formosa sandy islands, Algarve, Portugal.
- c. **Available data:** Data collection will take place on Faro and Barreta/Deserta Islands. Students will get training on species identification and data collection. They will take part in the seasonal monitoring of both populations, mainly during chick rearing period. Visits to each colony will take place every 2-3 days. Students will also have the opportunity to join the annual census and chick ringing campaigns. Data collected in previous years will be made available for analysis.

### 3. Proposed tasks

- a. Daily visits to seabird colonies for monitoring and data collection
- b. Analysis of available
- c. Submit the work in a peer-reviewed journal (e.g. Airo journal)

### 4. Framework of the topic

- a. The topic is part of an ongoing project/study?  
 No  Yes  Funded project  Other project
- b. Is there any financial support?  
 No  Yes  Scholarship/salary  Field work/material

## Proposta 2



@Paulo Valdivieso (CCBYSA20)

### 1. Identification of the supervisor

- a. **Name:** Nuno Oliveira (Marine Conservation Department)
- b. **E-mail:** nuno.oliveira@spea.pt

### 2. Brief description

- a. **Proposed title:** **Assessing productivity, chick mortality and other parameters of breeding waders in Ria Formosa salt pans, Algarve**
- b. **Main objective:** To assess productivity, chick mortality, clutch size and reasons of failure of waders that breed in Ria Formosa salt pans, Algarve, Portugal. Species of interest include Kentish Plover *Charadrius alexandrinus*, Common Redshank *Tringa totanus*, Black-winged Stilt *Himantopus himantopus*, Pied Avocet *Recurvirostra avosetta*, Common Shelduck *Tadorna tadorna* and Little Tern *Sternula albifrons*.
- c. **Available data:** Data collection will take place in Olhão salt pans. Students will get training on species identification and data collection. They will take part in the seasonal monitoring of both populations, mainly during chick rearing period. Students will also have the opportunity to join the chick ringing campaigns. Data on biophysics parameters (e.g. temperature, salinity, tank depth, etc.) will be made available for analysis.

### 3. Proposed tasks

- a. Every 2-3 days visits to wader colonies for monitoring and data collection
- b. Analysis of available
- c. Submit the work in a peer-reviewed journal (e.g. Airo journal)

### 4. Framework of the topic

- a. The topic is part of an ongoing project/study?  
 No  Yes  Funded project  Other project
- b. Is there any financial support?  
 No  Yes  Scholarship/salary  Field work/material

## Proposta 3



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### 1. Identification of the supervisor

- a. **Name:** Rita Ferreira (Terrestrial Conservation Area)
- b. **E-mail:** rita.ferreira@spea.pt

### 2. Brief description

- a. **Proposed title:** Automatic classification and counting of human presence in images acquired using camera traps

- b. **Main objective:** Development of an automated system for the detection, classification, and counting of people in camera trap images collected within the LIFE LxAquila project “Stewardship Network for the Conservation of Peri-Urban Bonelli's Eagles”. The main objective is to quantify patterns of human use and assess disturbance levels in areas critical for the conservation of the species, thereby supporting evidence-based management decisions and potential scientific publication.

The work will focus on the design and implementation of a computer vision pipeline based on deep learning models (e.g., object detection and tracking architectures), capable of: (i) automatically detecting people and animals in approximately 1 TB of RGB and infrared images; (ii) estimating the number of individuals per image and per event by aggregating temporal sequences corresponding to the same passage; (iii) classifying the type of use (on foot, vehicle, bicycle, motorcycle, among others); and (iv) exporting structured outputs (CSV format) integrating metadata such as timestamp, event duration, and camera location.

The solution should be robust to challenging conditions (low light, noise, motion blur, variable angles, false positives), scalable to large datasets, and support quantitative performance evaluation, including potential adaptation or fine-tuning of pre-trained models. The final system should be applied to more than 1 TB of images, and results exported in CSV format.

- c. **Available data:** More than 1 TB of JPEG images collected using 20 motion-triggered camera traps. A substantial subset of images has been manually annotated to enable supervised training of the system.
- d. **Submission deadline:** September/October 2026

### 3. Proposed tasks

- a. Development of an automated system for the detection, classification, and counting of people in camera trap images;

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- b. Automatic classification and counting of people in 1 TB of JPEG images according to the defined criteria;
- c. Export of the classification and counting results in CSV format.

#### 4. Framework of the topic

- a. The topic is part of an ongoing project/study?  
 No  Yes  Funded project  Other project
- b. Is there any financial support?  
 No  Yes  Scholarship/salary  Field work



## Proposta 5



Cory's shearwater nest @SPEA

### 1. Identification of the supervisor

- a. **Name:** Cátia Gouveia (Madeira Department)
- b. **E-mail:** catia.gouveia@spea.pt

### 2. Brief description

- a. **Proposed title:** Effect of Artificial Light At Night (ALAN) and moon phase in the year-round distribution and abundance of seabirds
- b. **Main objective:** The main goal of this topic is to analyse the effect of artificial light at night in the year-round distribution and abundance of seabirds breeding in Madeira Island.
- c. **Available data:** Seabirds' colonies will be monitored through autonomous recording units. ARUs will be placed on the 12 N2000 areas to confirm breeding colonies and to estimate population size. Call rate data will be analysed together with luminosity data (light pollution, moonlight, and night sky brightness). The student will have the opportunity to take part of data collection and fieldwork. Also, the entire dataset will be made available for analysis. This topic is developed within the project LIFE Natura@night.

### 3. Proposed tasks

- a. Analysis of several datasets
- b. Join the fieldwork sessions
- c. Collect additional data on identified seabird colonies
- d. Submit the work in a peer-reviewed journal

### 4. Framework of the topic

- a. The topic is part of an ongoing project/study?  
 No  Yes  Funded project  Other project
- b. Is there any financial support?  
 No  Yes  Scholarship/salary  field work/material

## Proposta 6



@Simão Silva, Pedro Eça, Hany Alonso

### 1. Identificação do orientador/tutor

- a. **Nome:** Hany Alonso (Departamento de Conservação)
- b. **E-mail:** hany.alonso@spea.pt

### 2. Descrição sumária da proposta de trabalho

- a. **Título provisório:** **Estudo preliminar sobre o impacto das superfícies espelhadas na avifauna em Portugal**
- b. **Objetivo geral:** Levantamento de informação e avaliação preliminar do impacto das superfícies espelhadas na avifauna residente e migradora.
- c. **Informação disponível:** Na Europa central, estima-se que dezenas de milhões de aves morram em colisões contra superfícies espelhadas. Estas colisões ocorrem porque as aves não conseguem reconhecer este tipo de barreiras e a instalação de superfícies espelhadas na imediação de espaços verdes, ou que pela sua posição reflitam o céu e/ou a vegetação próxima, são uma armadilha visual para as aves. Esta problemática está mal documentada, mas investigação recente aponta para que seja um problema muitíssimo subestimado, e para o qual seja necessário um esforço dirigido de monitorização e de identificação de pontos críticos. Em Portugal, embora existam registos pontuais de colisões contra edifícios e campos de padel, a problemática não está estudada, não havendo nenhuma estimativa dos impactos sobre a avifauna.

### 3. Tarefas previstas

- a. Caracterização das colisões com superfícies espelhadas em Portugal (espécies afetadas, efeito da sazonalidade e fenologia, tipo e características das estruturas) através da análise de dados recolhidos através de uma iniciativa de ciência-cidadã
- b. Recolha de informação complementar sobre a problemática recorrendo a diferentes fontes e instituições e através de um questionário online
- c. Visitas sistemáticas a hotspots de colisões já identificados e/ou locais com superfícies espelhadas com potencial para colisões (e.g., campos de padel em áreas verdes) para quantificação dos impactos nos períodos críticos para diferentes espécies (migração pós-outonal, época de cria)
- d. Produção de relatório final com caracterização deste tipo de colisões, identificação de locais problemáticos, espécies afetadas e estimativas preliminares do impacto das superfícies espelhadas na avifauna
- e. Preparação de um plano para a realização de testes com diferentes medidas anti-colisão, nas épocas de migração pós-outonal e de cria

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### 4. Enquadramento da proposta de tema

- a. A proposta enquadra-se num estudo já a decorrer?  
 Não  Sim  Projeto financiado  Outro projeto
- b. Há apoio financeiro às despesas de realização do trabalho?  
 Não  Sim  Bolsa/honorários  Trabalho de campo/material

## Proposta 7



Color-ringed Yellow-legged gull @SPEA

1. **Identification of the supervisor**
  - a. **Name:** Nuno Oliveira (Marine Conservation Department)
  - b. **E-mail:** nuno.oliveira@spea.pt
2. **Brief description**
  - a. Proposed title: Exploring demography and spatial behaviour in a generalist seabird using colour rings
  - b. Main objective: The main goal of this topic is to explore the demographic parameters and spatial behaviour of Yellow-legged Gulls using data from 3 different breeding colonies, Berlengas Archipelago, Barrier Islands and Oporto city. Survival of different age classes and its evolution over the last 3 decades will be explored. Recruitment, sink and source populations are concepts also to be explored. The influence of age and time on spatial choices of Yellow-legged Gulls will be analysed.
  - c. Available data: Adult and juvenile birds are being individually ringed in Berlengas (since 1996), Barrier Islands (since 2020) and Oporto (in 2021) colonies during breeding season. Sightings on Yellow-legged Gulls by volunteer observers and other enthusiastic people are stored in a long database. The student will have the opportunity to take part of data collection and fieldwork. Also, the entire dataset will be made available for analysis. This topic is developed within the project LIFE SeaBil and LIFE Ilhas Barreira.
3. **Proposed tasks**
  - a. Analysis of the available data
  - b. Join the monthly fieldwork sessions in Berlengas Archipelago (7 days/session)
  - c. Reading colour rings
  - d. Take part in ringing activities (only late June or July)
  - e. Submit the work in a peer-reviewed journal
4. **Framework of the topic**
  - a. The topic is part of an ongoing project/study?  
 No  Yes  Funded project  Other project
  - b. Is there any financial support?  
 No  Yes  Scholarship/salary  field work/material

## Proposta 8



@Tânia Nascimento

### 1. Identification of the supervisor

- a. **Name:** Nuno Oliveira (Marine Conservation Department)
- b. **E-mail:** nuno.oliveira@spea.pt

### 2. Brief description

- a. **Proposed title:** Exploring human and environmental drivers of the European Shag trophic ecology in Portugal
- b. **Main objective:** The main goal of this topic is to explore the trophic ecology of European Shag that breed in Berlengas archipelago and Arrábida. Using direct observations of nest and stomachal contents, we intend also to assess effects of diet on breeding success and other demographic parameters. Students are needed to have a connection with a university or other organization with own lab facilities to support the processing of pellets. Students will take part in the monitoring and pellet collection. They will also have the opportunity to join other initiatives of fieldwork lead by our team, in case they desire to.
- c. **Available data:** >10 years' time series of data on population size, breeding success and diet. Also, the entire dataset will be made available for analysis. This topic is developed within the SPEA Programme for Monitoring and Conservation of Berlengas and project LIFE RestoreSeaGrass.

### 3. Proposed tasks

- a. Join the monthly fieldwork sessions (8 days each session)
- b. Collect pellets and data on demographic parameters
- c. Pellets processing on lab
- d. Data analysis
- e. Submit the work in a peer-reviewed journal (e.g. Airo journal)

### 4. Framework of the topic

- c. The topic is part of an ongoing project/study?  
 No  Yes  Funded project  Other project
- d. Is there any financial support?  
 No  Yes  Scholarship/salary  field work/material

## Proposta 9



Cory's shearwater rescued by volunteers @SPEA

**1. Identification of the supervisor**

- a. **Name:** Cátia Gouveia (Madeira Department)
- b. **E-mail:** catia.gouveia@spea.pt

**2. Brief description**

- a. Proposed title: **Fitness and physiological parameters of juvenile Cory's shearwaters before and after fledging: are they similar?**
- b. Main objective: The main goal of this topic is to evaluate the fitness and physiological condition of Cory's Shearwater fledglings rescued by volunteers.
- c. Available data: In seabirds, juvenile survival at sea is positively correlated with body condition at fledging. In addition, fledglings are disoriented by artificial lights during their flights from their nests to the sea, and many of them fall on the ground and are rescued by volunteers to mitigate light-induced mortality.
- c. The student will have the opportunity to take part of fieldwork on the colonies and during rescue campaigns, collecting biometrics and physiological parameters for analysis. This topic is developed within the project LIFE Natura@night.

**3. Proposed tasks**

- a. Join the fieldwork sessions
- b. Monitoring colonies and ringing campaigns
- c. Collect data during rescue campaigns
- d. Submit the work in a peer-reviewed journal

**4. Framework of the topic**

- a. The topic is part of an ongoing project/study?  
 No  Yes  Funded project  Other project
- b. Is there any financial support?  
 No  Yes  Scholarship/salary  field work/material

## Proposta 10



@Rita Matos

### 1. Identification of the supervisor

- a. **Name:** Nuno Oliveira (Marine Conservation Department)
- b. **E-mail:** nuno.oliveira@spea.pt

### 2. Brief description

- a. **Proposed title:** **Quality status of seabird populations occurring in Portuguese waters using OSPAR Common Indicator Assessments**
- b. **Main objective:** The main goal of this topic is to evaluate the status of seabird populations that occur in Portugal mainland waters. The OSPAR Common Indicators foreseen in these analyses are the B1 – Marine Bird Abundance, B3 – Marine Bird Breeding Productivity, B7 – Marine Bird Habitat Quality and B5 – Marine Bird Bycatch. Using data collected on breeding colonies, at sea counts and bycatch, we intend to assess the quality status of each seabird population. The internee/student is welcome to choose one or more target species to work on. Alternatively, one OSPAR indicator can be used to assess a group of species.
- c. **Available data:** >10 years' time series of data on population size and breeding success/productivity for the breeding species. >15 years data set on at sea counts. Available data on bycatch. The student will have the opportunity to take part of data collection and fieldwork. Also, the entire dataset will be made available for analysis. This topic is developed within the project LIFE SeaBil, LIFE PanPuffinus and LIFE Ilhas Barreira.

### 3. Proposed tasks

- a. Analysis of available data
- b. Join the monthly fieldwork sessions (7 days each session) in Berlengas archipelago
- c. Collect data on breeding parameters and counts at sea
- d. Submit the work in a peer-reviewed journal

### 4. Framework of the topic

- a. The topic is part of an ongoing project/study?  
 No  Yes  Funded project  Other project
- b. Is there any financial support?  
 No  Yes  Scholarship/salary  field work/material

## Proposta 11



@SPEA

**1. Identification of the supervisor**

- a. **Name:** Nuno Oliveira (Marine Conservation Department)
- b. **E-mail:** nuno.oliveira@spea.pt

**2. Brief description**

- a. **Proposed title:** **Seabirds and Fisheries - when and where do they cross their path?**
- b. **Main objective:** The main goal is to explore the spatio-temporal interactions between seabirds and commercial fisheries in Portugal mainland waters.
- c. **Available data:** Since 2005, vessel surveys are being performed to collect abundance, distribution and behaviour data of seabirds at Portugal mainland waters, using ESAS (European Seabirds at Sea) methodology. All data will be available for analysis. The student may take part in some at sea surveys during the internship period. Meanwhile, AIS (Automatic Information System) data on distribution (both spatial and temporal) is available for boats (length > 15m) operating in the same area, at Global Fishing Watch portal from 2012 onwards. For smaller than 15m boats, interviews to fishermen are being performed at a non-regular basis since 2009. Finally, data on fishing gear characterizations is available from the national and European fishing authorities.

**3. Proposed tasks**

- a. Analysis of seabird and fisheries data
- a. Collect data during boat surveys (optional)
- b. Take part on fieldwork missions, related or not with the topic (optional)
- b. Submit the work in a peer-reviewed journal

**4. Framework of the topic**

- a. The topic is part of an ongoing project/study?  
 No  Yes  Funded project  Other project
- b. Is there any financial support?  
 No  Yes  Scholarship/salary  field work/material

## Proposta 12



@Hany Alonso

**1. Identification of the supervisor**

- a. **Name:** Hany Alonso
- b. **E-mail:** hany.alonso@spea.pt

**2. Brief description**

- a. Proposed title: **Seabird strandings in the Portuguese coast**
- b. Main objective: To characterize seabird strandings in the Portuguese coast, looking into the species and age-classes affected, spatial and seasonal patterns, but also to temporal changes over the last decades.
- c. Available data: SPEA has been working on this topic for more than 20 years, conducting beach bird surveys in the Portuguese coastline, in the context of different projects, but also collecting information through citizen science. Since 2023, SPEA (together with other Birdlife partners) launched an app (ICAO) to facilitate the report of seabird strandings by citizens, having received more than 1.250 observations in three years. All data (previously collected and collected during the study) will be available for analysis.

**3. Proposed tasks**

- a. Organisation and update of the seabird strandings dataset
- b. Bibliographic review and data compilation
- c. Fieldwork - Collect data through beach bird surveys (optional)
- d. Analyse data and characterize the strandings in the Portuguese coast (species and age-classes affected; estimate numbers per effort unit; spatial and temporal patterns; long-term changes; identification of causes)
- e. Submit the work in a peer-reviewed journal

**4. Framework of the topic**

- a. The topic is part of an ongoing project/study?  
 No  Yes  Funded project  Other project
- b. Is there any financial support?  
 No  Yes  Scholarship/salary  field work/material

## Proposta 13



@SPEA

### 1. Identification of the supervisor

- a. **Name:** Ana Almeida (Marine Conservation Department)
- b. **E-mail:** ana.almeida@spea.pt

### 2. Brief description

- a. **Proposed title:** **When Seabirds Follow the Fleet: How Fishing Activity and Prey Shape Interaction Probability**
- b. **Main objective:** To investigate how purse-seine fishing activity and the abundance of small pelagic fish influence the probability of occurrence of interactions between seabirds and the Portuguese purse-seine fishery in mainland waters.
- c. **Available data:** Since 2005, vessel surveys are being performed to collect abundance, distribution and behaviour data of seabirds at Portugal mainland waters, using ESAS (European Seabirds at Sea) methodology. All data will be available for analysis. The student may take part in some at sea surveys during the internship period. Data on purse seine fishing, namely fishing effort and catches per unit effort, will be requested from the authorities.

### 3. Proposed tasks

- a. Analysis of seabird and fisheries data
- b. Collect data during boat surveys (optional)
- c. Take part on fieldwork missions, related or not with the topic (optional)
- d. Submit the work in a peer-reviewed journal

### 4. Framework of the topic

- a. The topic is part of an ongoing project/study?  
 No  Yes  Funded project  Other project
- b. Is there any financial support?  
 No  Yes  Scholarship/salary  field work/material