



# BIOL8610

## Conservation and Management of Wild Populations

Session 1, In person-scheduled-weekday, North Ryde 2025

*School of Natural Sciences*

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#### **Disclaimer**

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## General Information

Unit convenor and teaching staff

Benjamin Pitcher

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Credit points

10

Prerequisites

Corequisites

Co-badged status

Unit description

This unit deals with the theory and practice of the conservation and management of wild populations of animals and plants. Lectures and workshops concentrate on the application of population biology to problems in wildlife conservation, including demographics, risk assessment, conservation genetics and monitoring protocols. Case studies will be drawn from Australia and the rest of the world. Note that there is a small cost associated with fieldtrips to Taronga Zoo and local National Parks.

Learning in this unit enhances student understanding of global challenges identified by the United Nations Sustainable Development Goals ([UNSDGs](#)) Life on Land

## Important Academic Dates

Information about important academic dates including deadlines for withdrawing from units are available at <https://www.mq.edu.au/study/calendar-of-dates>

## Learning Outcomes

On successful completion of this unit, you will be able to:

**ULO1:** Demonstrate knowledge of the processes influencing the demography and genetic structure of wild populations, and of the theory, principles, and methods of managing wild populations for conservation purposes

**ULO2:** Gather, critically evaluate and synthesise diverse information sources to make an assessment of extinction risk, potential conservation actions, and critical knowledge gaps, for particular species and populations

**ULO3:** Describe methods used to monitor wild populations, including the particular population-level parameters being measured, the potential sampling biases of these

methods, ethical considerations, and their application to conservation

**ULO4:** Design a scientific study that implements population monitoring protocols to critically assess a conservation action, or addresses a critical knowledge gap, for a particular species or population

**ULO5:** Review, critically evaluate and synthesise diverse scientific literature in the area of conservation biology and communicate an understanding of this in a written form

## General Assessment Information

### Requirements to Pass this Unit

To pass this unit you need to achieve a total mark equal to or greater than 50% across all assessments.

We strongly encourage all students to actively participate in all learning activities. This unit includes presentation from a range of conservation professionals and practitioners, as such participation offers the chance to engage in questions and discussions. Regular engagement is crucial for your success in this unit, as these activities provide opportunities to deepen your understanding of the material, collaborate with peers, and receive valuable feedback from instructors, to assist in completing the unit assessments. Your active participation not only enhances your own learning experience but also contributes to a vibrant and dynamic learning environment for everyone.

### Late Assessment Submission Penalty

Unless a Special Consideration request has been submitted and approved, a 5% penalty (of the total possible mark of the task) will be applied for each day a written report or presentation assessment is not submitted, up until the 7th day (including weekends). After the 7th day, a grade of '0' will be awarded even if the assessment is submitted. The submission time for all uploaded assessments is 11:55 pm. A 1-hour grace period will be provided to students who experience a technical concern. For any late submission of time-sensitive tasks, such as scheduled tests/exams, performance assessments/presentations, and/or scheduled practical assessments/labs, please apply for [Special Consideration](#).

### *Assessments where Late Submissions will be accepted*

- Species Assessment – YES, Standard Late Penalty applies
- Project Outline: Conservation of an Australasian species – YES, Standard Late Penalty applies
- Developing a grant application – YES, Standard Late Penalty applies
- Short Test - NO, unless Special Consideration is Granted

## Special Consideration

The [Special Consideration Policy](#) aims to support students who have been impacted by short-term circumstances or events that are serious, unavoidable and significantly disruptive, and which may affect their performance in assessment. If you experience circumstances or events that affect your ability to complete the assessments in this unit on time, please inform the convenor and submit a Special Consideration request through <https://connect.mq.edu.au>.

## Assessment Tasks

| Name   | Weighting | Hurdle | Due                               |
|--|-----------|--------|-----------------------------------|
| <a href="#">Short Test</a>   | 20%       | No     | 16 March, 6 April, 11 May, 1 June |
| <a href="#">Species Assessment</a>                                       | 20%       | No     | 23/03/2025                        |
| <a href="#">Project Outline: Conservation of an Australasian species</a> | 20%       | No     | 13/04/2025                        |
| <a href="#">Developing a grant application</a>                           | 40%       | No     | 08/06/2025                        |

## Short Test

Assessment Type <sup>1</sup>: Quiz/Test

Indicative Time on Task <sup>2</sup>: 15 hours

Due: **16 March, 6 April, 11 May, 1 June**

Weighting: **20%**

There will be several short tests to be completed in your own time. Each test will be based on any lecture or workshop material given up to that point. The questions may involve interpretation of a graph or some data, or may be numerical.

On successful completion you will be able to:

- Demonstrate knowledge of the processes influencing the demography and genetic structure of wild populations, and of the theory, principles, and methods of managing wild populations for conservation purposes

## Species Assessment

Assessment Type <sup>1</sup>: Presentation

Indicative Time on Task <sup>2</sup>: 15 hours

Due: **23/03/2025**

Weighting: **20%**

Prepare a presentation on a threatened native Australasian species. The species must be listed on a national list of threatened species (such as the EPBC List of Threatened Fauna) or on the IUCN Red List).

On successful completion you will be able to:

- Demonstrate knowledge of the processes influencing the demography and genetic structure of wild populations, and of the theory, principles, and methods of managing wild populations for conservation purposes
- Gather, critically evaluate and synthesise diverse information sources to make an assessment of extinction risk, potential conservation actions, and critical knowledge gaps, for particular species and populations
- Review, critically evaluate and synthesise diverse scientific literature in the area of conservation biology and communicate an understanding of this in a written form

## Project Outline: Conservation of an Australasian species

Assessment Type <sup>1</sup>: Report

Indicative Time on Task <sup>2</sup>: 15 hours

Due: **13/04/2025**

Weighting: **20%**

Prepare a concise outline for a project that involves monitoring and/or experimental manipulation of your chosen Australasian species that assesses a conservation action or addresses a critical knowledge gap. This proposal will include a clear research question(s), a description of the data to be collected and a brief description of the experimental or sampling design.

On successful completion you will be able to:

- Demonstrate knowledge of the processes influencing the demography and genetic structure of wild populations, and of the theory, principles, and methods of managing wild populations for conservation purposes
- Gather, critically evaluate and synthesise diverse information sources to make an assessment of extinction risk, potential conservation actions, and critical knowledge gaps, for particular species and populations
- Describe methods used to monitor wild populations, including the particular population-level parameters being measured, the potential sampling biases of these methods,

ethical considerations, and their application to conservation

- Design a scientific study that implements population monitoring protocols to critically assess a conservation action, or addresses a critical knowledge gap, for a particular species or population
- Review, critically evaluate and synthesise diverse scientific literature in the area of conservation biology and communicate an understanding of this in a written form

## Developing a grant application

Assessment Type <sup>1</sup>: Report

Indicative Time on Task <sup>2</sup>: 29 hours

Due: **08/06/2025**

Weighting: **40%**

You will develop a grant application to undertake research on a species or ecological community of conservation interest. The application will include essential background, research question, study design, ethical concerns, appropriate timelines, realistic budget and expected outcomes.

On successful completion you will be able to:

- Demonstrate knowledge of the processes influencing the demography and genetic structure of wild populations, and of the theory, principles, and methods of managing wild populations for conservation purposes
- Gather, critically evaluate and synthesise diverse information sources to make an assessment of extinction risk, potential conservation actions, and critical knowledge gaps, for particular species and populations
- Describe methods used to monitor wild populations, including the particular population-level parameters being measured, the potential sampling biases of these methods, ethical considerations, and their application to conservation
- Design a scientific study that implements population monitoring protocols to critically assess a conservation action, or addresses a critical knowledge gap, for a particular species or population
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<sup>1</sup> If you need help with your assignment, please contact:

- the academic teaching staff in your unit for guidance in understanding or completing this

type of assessment

- the [Writing Centre](#) for academic skills support.

<sup>2</sup> Indicative time-on-task is an estimate of the time required for completion of the assessment task and is subject to individual variation

## Delivery and Resources

Classes begin in week 1.

This course is delivered in weekly in-person sessions combining lectures and interactive workshops. There will be some off-campus visits to local fieldsites. Please see iLearn for more details.

There will be an in person session from 9 am - 1 pm on Fridays. The first part of this session (9 am to 11 am) will be held in 1CC 218 Teaching Space. The second part of this session (11 am to 1 pm) will be held in 14EaR 386 Computer Lab.

We will communicate with you via your university email and through announcements on iLearn. Queries to the convenor can either be placed on the iLearn discussion board or sent to the unit convenor via email.

## Policies and Procedures

Macquarie University policies and procedures are accessible from [Policy Central \(https://policies.mq.edu.au\)](https://policies.mq.edu.au). Students should be aware of the following policies in particular with regard to Learning and Teaching:

- [Academic Appeals Policy](#)
- [Academic Integrity Policy](#)
- [Academic Progression Policy](#)
- [Assessment Policy](#)
- [Fitness to Practice Procedure](#)
- [Assessment Procedure](#)
- [Complaints Resolution Procedure for Students and Members of the Public](#)
- [Special Consideration Policy](#)

Students seeking more policy resources can visit [Student Policies \(https://students.mq.edu.au/support/study/policies\)](https://students.mq.edu.au/support/study/policies). It is your one-stop-shop for the key policies you need to know about throughout your undergraduate student journey.

To find other policies relating to Teaching and Learning, visit [Policy Central \(https://policies.mq.edu.au\)](https://policies.mq.edu.au) and use the [search tool](#).

## Student Code of Conduct

Macquarie University students have a responsibility to be familiar with the Student Code of

Conduct: <https://students.mq.edu.au/admin/other-resources/student-conduct>

## Results

Results published on platform other than [eStudent](#), (eg. iLearn, Coursera etc.) or released directly by your Unit Convenor, are not confirmed as they are subject to final approval by the University. Once approved, final results will be sent to your student email address and will be made available in [eStudent](#). For more information visit <connect.mq.edu.au> or if you are a Global MBA student contact [globalmba.support@mq.edu.au](mailto:globalmba.support@mq.edu.au)

## Academic Integrity

At Macquarie, we believe [academic integrity](#) – honesty, respect, trust, responsibility, fairness and courage – is at the core of learning, teaching and research. We recognise that meeting the expectations required to complete your assessments can be challenging. So, we offer you a range of resources and services to help you reach your potential, including free [online writing and maths support](#), [academic skills development](#) and [wellbeing consultations](#).

## Student Support

Macquarie University provides a range of support services for students. For details, visit <http://students.mq.edu.au/support/>

## Academic Success

[Academic Success](#) provides resources to develop your English language proficiency, academic writing, and communication skills.

- [Workshops](#)
- [Chat with a WriteWISE peer writing leader](#)
- [Access StudyWISE](#)
- [Upload an assignment to Studiosity](#)
- [Complete the Academic Integrity Module](#)

The Library provides online and face to face support to help you find and use relevant information resources.

- [Subject and Research Guides](#)
- [Ask a Librarian](#)

## Student Services and Support

Macquarie University offers a range of [Student Support Services](#) including:

- [IT Support](#)
- [Accessibility and disability support](#) with study
- Mental health [support](#)
- [Safety support](#) to respond to bullying, harassment, sexual harassment and sexual



assault

- [Social support including information about finances, tenancy and legal issues](#)
- [Student Advocacy](#) provides independent advice on MQ policies, procedures, and processes

## Student Enquiries

Got a question? Ask us via the [Service Connect Portal](#), or contact [Service Connect](#).

## IT Help

For help with University computer systems and technology, visit [http://www.mq.edu.au/about\\_us/offices\\_and\\_units/information\\_technology/help/](http://www.mq.edu.au/about_us/offices_and_units/information_technology/help/).

When using the University's IT, you must adhere to the [Acceptable Use of IT Resources Policy](#). The policy applies to all who connect to the MQ network including students.

## Changes from Previous Offering

We value student feedback to be able to continually improve the way we offer our units. As such we encourage students to provide constructive feedback via student surveys, to the teaching staff directly, or via the FSE Student Experience & Feedback link in the iLearn page. Student feedback from the previous offering of this unit was very positive overall, with students pleased with the clarity around assessment requirements and the level of support from teaching staff. As such, no change to the delivery of the unit is planned, however we will continue to strive to improve the level of support and the level of student engagement.

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Unit information based on version 2025.04 of the [Handbook](#)