



BIOL861

Conservation of Australasian Wildlife

S2 External 2014

Dept of Biological Sciences

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General Information

Unit convenor and teaching staff

Other Staff

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Unit Convenor

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E8B105

Credit points

4

Prerequisites

GSE804 or GSE807 or (admission to MSc in Biodiversity Conservation or PGDipSc in Biodiversity Conservation or PGCertSc in Biodiversity Conservation or MClimCh or MMarScMgt or MEnv or MWldMgt or PGDipWldMgt)

Corequisites

Co-badged status

This unit is co-taught with BIOL761.

Unit description

This unit deals with the theory and practice of the conservation of wild populations, with an emphasis on Australasian vertebrates. Lectures discuss the origins, diversity and evolutionary adaptations of the Australasian vertebrate fauna; current and emerging threats; and the theoretical aspects of wildlife conservation. Practical skills, including computer modelling, population monitoring, animal handling and experimental design, are taught in the laboratory and in the field.

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:

Demonstrate an understanding of the diversity, evolutionary adaptations and origins of the Australasian vertebrate fauna, and the major environmental / geological processes that have shaped it.

Develop a working knowledge of the methods used to monitor wild populations and apply these methods in surveys at sea and on the land.

Apply population modelling techniques to problems in wildlife management.

Develop a scientifically sound research project for a threatened Australasian species and design a monitoring or experimental scheme, including ethics considerations, to implement that project.

Assessment Tasks

Name	Weighting	Due
<u>Annotated bibliography</u>	20%	Week 4
<u>Project outline</u>	20%	Week 7
<u>Ethics application</u>	30%	Week 8
<u>Abstract</u>	5%	Week 11
<u>Project proposal</u>	25%	Week 12

Annotated bibliography

Due: **Week 4**

Weighting: **20%**

Conduct a literature search on a particular species of Australasian wildlife (vertebrates only) that is listed as threatened and compile an annotated bibliography of at least 5-10 references. An annotated bibliography is a list of research sources. For each source, list the citation followed by a brief summary and evaluation of the content (150-300 words). The aim is to undertake comprehensive research on all aspects of the biology of your chosen species with a view to developing a research project.

On successful completion you will be able to:

- Demonstrate an understanding of the diversity, evolutionary adaptations and origins of the Australasian vertebrate fauna, and the major environmental / geological processes that have shaped it.

Project outline

Due: **Week 7**

Weighting: **20%**

Prepare a concise outline for a project that involves monitoring and/or experimental manipulation of your chosen Australasian species (the same as for the annotated bibliography). This proposal will include a clear research question, a description of the data to be collected and a brief description of the experimental or sampling design. This project will be the same as you use for your ethics application and presentation. The outline should be no more than two pages, including figures and references.

On successful completion you will be able to:

- Develop a working knowledge of the methods used to monitor wild populations and apply these methods in surveys at sea and on the land.
- Apply population modelling techniques to problems in wildlife management.
- Develop a scientifically sound research project for a threatened Australasian species and design a monitoring or experimental scheme, including ethics considerations, to implement that project.

Ethics application

Due: **Week 8**

Weighting: **30%**

Prepare an ethics application for a wildlife project (same as your project outline) by filling in a Wildlife Protocol Application form.

On successful completion you will be able to:

- Develop a working knowledge of the methods used to monitor wild populations and apply these methods in surveys at sea and on the land.
- Develop a scientifically sound research project for a threatened Australasian species and design a monitoring or experimental scheme, including ethics considerations, to implement that project.

Abstract

Due: **Week 11**

Weighting: **5%**

Prepare an abstract (internal students) or executive summary (external students) of 300-500 words summarising your project proposal for research on your chosen species of Australasian vertebrate. This abstract should include citations and a bibliography and should be no more than a page in length. Be clear as to your research question, your study design and your expected outcomes.

On successful completion you will be able to:

- Develop a working knowledge of the methods used to monitor wild populations and apply these methods in surveys at sea and on the land.
- Develop a scientifically sound research project for a threatened Australasian species and design a monitoring or experimental scheme, including ethics considerations, to implement that project.

Project proposal

Due: **Week 12**

Weighting: **25%**

You will make a project proposal, including essential background, research question, study design, ethical concerns, appropriate timelines, realistic budget and expected outcomes. This proposal will be in the form of an application for a grant for funding over a 3-year period. The proposal will be given as a spoken presentation (internal students) or a written assignment (external students).

On successful completion you will be able to:

- Demonstrate an understanding of the diversity, evolutionary adaptations and origins of the Australasian vertebrate fauna, and the major environmental / geological processes that have shaped it.
- Develop a working knowledge of the methods used to monitor wild populations and apply these methods in surveys at sea and on the land.
- Apply population modelling techniques to problems in wildlife management.
- Develop a scientifically sound research project for a threatened Australasian species and design a monitoring or experimental scheme, including ethics considerations, to implement that project.

Delivery and Resources

Delivery

Lectures and tutorials are weekly (see timetable and unit schedule). Lectures are recorded and will be available from the ilearn website. External students are expected to complete tutorials in their own time using the materials posted on the ilearn website. Some material is delivered by weekend block session (see timetable and unit schedule) - attendance at these sessions is compulsory.

Textbook

There is no assigned textbook for this unit. Recommended readings will be listed on the unit ilearn page.

Computing requirements

Access to a computer with basic office software and an internet connection is required for assignments. Some tutorials require software that runs on Windows. A computer lab with PCs running Windows 8 will be used during tutorials and is also available at other times to postgraduate coursework students.

Unit Schedule

Provisional - details may change

Block sessions are compulsory

Week	Lecture	Tutorial	Weekend block session
1	Introduction	<i>No tutorial</i>	
2	Origins, diversity and evolution	Threatened species	
3	Conservation issues	Habitat loss and fragmentation	
			Session 1: Terrestrial (23-24 Aug)
4	Population monitoring	Estimating population size	
5	Population dynamics	Life Table analysis	
6	Risk assessment	Wildlife research ethics	
7	Conservation of populations	Population Viability Analysis	
8	<i>No lecture</i>	<i>No tutorial</i>	
			Session 2: Marine (11-12 Oct)
9	Conservation genetics	Species Distribution Modelling	
10	Species concepts	<i>No tutorial</i>	
11	Listing threatened species	<i>No tutorial</i>	
12	<i>Student presentations</i>	<i>Student presentations</i>	

Policies and Procedures

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

Academic Honesty Policy http://mq.edu.au/policy/docs/academic_honesty/policy.html

Assessment Policy <http://mq.edu.au/policy/docs/assessment/policy.html>

Grading Policy <http://mq.edu.au/policy/docs/grading/policy.html>

Grade Appeal Policy <http://mq.edu.au/policy/docs/gradeappeal/policy.html>

Grievance Management Policy http://mq.edu.au/policy/docs/grievance_management/policy.html

Disruption to Studies Policy http://www.mq.edu.au/policy/docs/disruption_studies/policy.html *The Disruption to Studies Policy is effective from March 3 2014 and replaces the Special Consideration Policy.*

In addition, a number of other policies can be found in the [Learning and Teaching Category](#) of Policy Central.

Student Code of Conduct

Macquarie University students have a responsibility to be familiar with the Student Code of Conduct: https://students.mq.edu.au/support/student_conduct/

Late assignments and extensions

Late tasks will be accepted up to 7 days after the submission deadline. There will be a deduction of 10% of the total available marks made from the total awarded mark for each 24 hour period or part thereof that the submission is late. This penalty does not apply for cases in which an application for an extension or special consideration is made and approved. Applications for extensions should be made directly to the unit convenors prior to the due date of the assignment. An extension will only be granted after the due date if evidence of misfortune can be provided. Students considering applying for Special Consideration (see policy above) should first consult with the unit convenors.

Student Support

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

Learning Skills

Learning Skills (mq.edu.au/learningskills) provides academic writing resources and study strategies to improve your marks and take control of your study.

- [Workshops](#)
- [StudyWise](#)
- [Academic Integrity Module for Students](#)
- [Ask a Learning Adviser](#)

Student Services and Support

Students with a disability are encouraged to contact the [Disability Service](#) who can provide appropriate help with any issues that arise during their studies.

Student Enquiries

For all student enquiries, visit Student Connect at ask.mq.edu.au

IT Help

For help with University computer systems and technology, visit <http://informatics.mq.edu.au/help/>.

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

Graduate Capabilities

PG - Discipline Knowledge and Skills

Our postgraduates will be able to demonstrate a significantly enhanced depth and breadth of knowledge, scholarly understanding, and specific subject content knowledge in their chosen fields.

This graduate capability is supported by:

Learning outcomes

- Demonstrate an understanding of the diversity, evolutionary adaptations and origins of the Australasian vertebrate fauna, and the major environmental / geological processes that have shaped it.
- Develop a working knowledge of the methods used to monitor wild populations and apply these methods in surveys at sea and on the land.
- Apply population modelling techniques to problems in wildlife management.
- Develop a scientifically sound research project for a threatened Australasian species and design a monitoring or experimental scheme, including ethics considerations, to implement that project.

Assessment tasks

- Annotated bibliography
- Ethics application
- Project proposal

PG - Critical, Analytical and Integrative Thinking

Our postgraduates will be capable of utilising and reflecting on prior knowledge and experience, of applying higher level critical thinking skills, and of integrating and synthesising learning and knowledge from a range of sources and environments. A characteristic of this form of thinking is the generation of new, professionally oriented knowledge through personal or group-based critique of practice and theory.

This graduate capability is supported by:

Learning outcomes

- Develop a working knowledge of the methods used to monitor wild populations and apply these methods in surveys at sea and on the land.
- Apply population modelling techniques to problems in wildlife management.

Assessment tasks

- Annotated bibliography
- Project outline
- Ethics application
- Project proposal

PG - Research and Problem Solving Capability

Our postgraduates will be capable of systematic enquiry; able to use research skills to create new knowledge that can be applied to real world issues, or contribute to a field of study or practice to enhance society. They will be capable of creative questioning, problem finding and problem solving.

This graduate capability is supported by:

Learning outcomes

- Develop a working knowledge of the methods used to monitor wild populations and apply these methods in surveys at sea and on the land.
- Apply population modelling techniques to problems in wildlife management.
- Develop a scientifically sound research project for a threatened Australasian species and design a monitoring or experimental scheme, including ethics considerations, to implement that project.

Assessment tasks

- Project outline
- Ethics application
- Project proposal

PG - Effective Communication

Our postgraduates will be able to communicate effectively and convey their views to different social, cultural, and professional audiences. They will be able to use a variety of technologically supported media to communicate with empathy using a range of written, spoken or visual formats.

This graduate capability is supported by:

Learning outcome

- Develop a scientifically sound research project for a threatened Australasian species and design a monitoring or experimental scheme, including ethics considerations, to implement that project.

Assessment tasks

- Annotated bibliography
- Project outline
- Ethics application
- Abstract
- Project proposal

PG - Engaged and Responsible, Active and Ethical Citizens

Our postgraduates will be ethically aware and capable of confident transformative action in relation to their professional responsibilities and the wider community. They will have a sense of connectedness with others and country and have a sense of mutual obligation. They will be able to appreciate the impact of their professional roles for social justice and inclusion related to national and global issues

This graduate capability is supported by:

Learning outcome

- Develop a scientifically sound research project for a threatened Australasian species and design a monitoring or experimental scheme, including ethics considerations, to implement that project.

Assessment tasks

- Ethics application
- Project proposal

PG - Capable of Professional and Personal Judgment and Initiative

Our postgraduates will demonstrate a high standard of discernment and common sense in their professional and personal judgment. They will have the ability to make informed choices and decisions that reflect both the nature of their professional work and their personal perspectives.

This graduate capability is supported by:

Learning outcome

- Develop a scientifically sound research project for a threatened Australasian species and design a monitoring or experimental scheme, including ethics considerations, to

implement that project.

Assessment tasks

- Project outline
- Ethics application
- Project proposal

Changes since First Published

Date	Description
10/07/2014	Updated assignment due dates, updated teaching schedule, and updated mapping of graduate capabilities.
16/01/2014	The Prerequisites was updated.