



# BIOL8750

## Contemporary Conservation in Australia

Session 1, Weekday attendance, North Ryde 2020

*Department of Biological Sciences*

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## General Information

Unit convenor and teaching staff

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Credit points

10

Prerequisites

Admission to MBiotech or MBioBus or GradDipBiotech or MConsBiol or GradDipConsBiol or GradCertConsBiol or MEnv or MEnvPlan or GradDipEnv or MMarScMgt or MSusDev or GradDipSusDev or MPlan or MSc or MSclInnovation or MSclInnovationBioConsMgmt or BBioConsMConsBiol

Corequisites

Co-badged status

Unit description

This unit provides a current perspective of the values, threats to existence and conservation of Australian wildlife. The special characteristics of the Australian biota (plants, animals and other organisms) and the key threatening processes are discussed as well as its global and historical context. The role of biological research in informing conservation management is explored, and how conservation-based research is communicated and interpreted. An emphasis is placed on case studies in conservation biology with critical analysis of conservation successes and failures.

## 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:** Describe theoretical concepts in conservation biology and current conservation issues in Australia and abroad

**ULO2:** Communicate scientific research and issues in conservation to various target audiences in verbal and written form

**ULO3:** Evaluate literature on conservation issues within peer-reviewed scientific literature and present them in the popular media

**ULO4:** Identify how research in conservation biology influences environmental management practices and assess how effectively this is undertaken

**ULO5:** Demonstrate a capacity for undertaking literature-based research into key topics in conservation biology and synthesising the current state-of-knowledge

## Assessment Tasks

### Coronavirus (COVID-19) Update

Assessment details are no longer provided here as a result of changes due to the Coronavirus (COVID-19) pandemic.

Students should consult [iLearn](#) for revised unit information.

[Find out more about the Coronavirus \(COVID-19\) and potential impacts on staff and students](#)

## General Assessment Information

### Weekly Online Quizzes

**Due: Weekly**

**Weighting: 24% (12 quizzes, 2% per quiz)**

This Assessment Task relates to the following Learning Outcomes:

- *Describe theoretical concepts in conservation biology and current conservation issues in Australia and abroad*
- *Communicate scientific research and issues in conservation to different target audiences in verbal and written form*
- *Demonstrate a capacity for undertaking literature-based research into key topics in conservation biology and synthesizing the current state-of-knowledge*

On the day following each lecture (excluding course overview and summary lecture), a quiz will become available on iLearn (worth ~2%) that you will have 6 days to complete. The 12 online exercises will consist of short answers and multiple-choice questions that **revise the topic of each lecture (including tutorial)**, encourage thinking and research skills, in alignment with the *Austral Ark* textbook chapters and any additional reading material. The exercises may involve consulting peer-reviewed literature discussed in lectures, external websites, and chapters within *Austral Ark*.

The schedule for the availability and due dates of each online quiz will be available on iLearn. *Note: quizzes become available before 5pm the day after each lecture and will close 6 DAYS LATER at 5pm.*

Quiz number	Start date	Due date
Q1	25 February	2 March
Q2	3 March	9 March
Q3	10 March	16 March
Q4	17 March	23 March
Q5	24 March	30 March
Q6	31 March	6 April
Q7	7 April	13 April
Q8	28 April	4 May
Q9	5 May	11 May
Q10	12 May	18 May
Q11	19 May	25 May
Q12	2 June	8 June

### Conservation Research Update: Presentation

**Due: Friday 3<sup>rd</sup> of April at 17:00 pm, Week 6**

**Weighting: 26%**

This Assessment Task relates to the following Learning Outcomes:

- *Communicate scientific research and issues in conservation to various target audiences in verbal and written form*
- *Identify how research in conservation biology influences environmental management practices and assess how effectively this is undertaken*
- *Demonstrate a capacity for undertaking literature-based research into key topics in conservation biology and synthesising the current state-of-knowledge*

Many conservation strategies lack up-to-date insights from recent research findings due to poor communication of science outside of academia. It is just as important that scientific research is understood by practitioners as it is to published it.

For this assessment, you are required to choose a specific topic of conservation interest recent (in the past five years) in Australia (or New Zealand/ Oceania). The topic you choose may, e.g., be in relation to a threatened/invasive species, a threatened habitat, or threatening processes such as fire, disease spread or human disturbance.

**Your task is to give a 10-minute pre-recorded presentation (using powerpoint slides with audio only) to pitch an update on a conservation issue of interest, integrating scientific literature published in the last FIVE years around your topic.**

Focus on the aspects of the scientific literature that relate to research insights related to conservation management of the topic you have chosen. **The aim of your presentation is to provide a RESEARCH UPDATE AND SYNTHESIS of a specific conservation topic, supported by the peer-reviewed scientific data.**

To be tractable and informative, your topic should be specific to a region, community or species. *For example*, a suitable research topic meeting these criteria might be “Recent advances in industrial technology to minimise environmental impacts caused by pollution in Australia”. Examples of a good presentation from previous years will be available on iLearn as an example of what is expected for this assignment.

**Specifically, you will:**

- Pitch your presentation to conservation decision-makers (e.g. land managers) who are *scientifically literate*, and have an interest in your chosen conservation topic. Keep it scientific, but relevant for management.
- Do a recent scientific literature search on the topic, provide brief background to your topic, collate and synthesise findings and conclusions.
- Communicate the contribution of recent research towards the understanding and management of your chosen conservation issue.
- See the marking rubric for more information on suggested structure and content and assessment weighing of various components.

Create slides for a PowerPoint presentation and **record your oral presentation** during the slide show using the continuous ‘record presentation’ function (for instructions: [see here for Mac](#); and [see here for PC](#)).

Provide a citation list in the last slide of your presentation for all sources used to retrieve information for the presentation. The citation list will not count towards you allocated 10 minutes.

Please note that late submissions will be penalised (-5%/day for submission received after the deadline).

**Conservation Research Update: Abstract**

**Due: Friday 3<sup>rd</sup> of April at 17:00 pm, Week 6**

**Weighting: 10%**

This Assessment Task relates to the following Learning Outcomes:

- *Communicate scientific research and issues in conservation to different target audiences in verbal and written form*
- *Identify how research in conservation biology influences environmental management practices and assess how effectively this is undertaken*
- *Demonstrate a capacity for undertaking literature-based research into key topics in conservation biology and synthesising the current state-of-knowledge*

Together with your Conservation Research Update Presentation (2a), submit an abstract of no more than 500 words that summarises your presentation, as if you were presenting it at an international scientific conference. Abstracts are a common way to explain your presentation in a short and interesting way and highlight the key points of your presentation and take-home messages. Abstracts should be written as a 'mini' research article, i.e. they should generally provide a brief background statement, information of what research was done and what the main findings were, followed by a concluding statement.

### **Conservation Biology in the Media Report**

**Up to 2000 words (including references)**

**Due: Friday May 8<sup>th</sup> at 17:00 pm, Week 9**

**Weighting: 40%**

This Assessment Task relates to the following Learning Outcomes:

- *Describe theoretical concepts in conservation biology and current conservation issues in Australia and abroad*
- *Evaluate literature on conservation issues within peer-reviewed scientific literature and present them in the popular media*
- *Demonstrate a capacity for undertaking literature-based research into key topics in conservation biology and synthesising the current state-of-knowledge*

Popular science articles remain an effective way to target the general public and to inform them of pertinent issues and/or exciting new discoveries. It is often difficult to translate scientific literature, that is full of specialist jargon, into material that is easily understood and captivating to read, and more importantly, accurately reflects the intended outcomes and message(s) of the research. As conservation biologists we must learn to better communicate our work to the public, the media, managers and policy makers. This task is designed to raise your awareness of these issues and ability to recognise and evaluate them by writing a popular science article on a relevant topic of your choice.

In a report *in your own words* (up to 2000 word), you will write a popular science article to *The Conversation* (see “<https://theconversation.com/au>).

To do this, you will choose a recently (< 1 years old, i.e. 2019-2020) **published scientific paper** from a journal within conservation biology. Do not pick a review paper, your paper must be a primary research paper. The chosen journal article may focus on conservation issues occurring **in any part of the world** (i.e. not restricted to Australia or New Zealand). Please do not use review, perspectives, commentary or synthesis papers as the primary sources of information, but rather consult a **primary research paper**.

Assessment of your popular article is worth 36% and can be up to 2000 words.

### Key requirements and guidelines:

- Write a popular science article (up to 2000 words) for *The Conversation* based on a recent research publication on a topic of your choosing related to conservation biology.
- Write your popular article in the style of *The Conversation*. See tips and guidelines at: <https://prezi.com/ie6qdpipaamx/science-how-to-write-for-the-conversation-and-pitch-your-pi-ence/> and the “Author Guide - The Conversation” on iLearn.
- Scientific articles should preferably be sourced from multidisciplinary and high-impact journals (e.g., Conservation Biology, Conservation Letters Current Biology, Biology Letters, Nature, Science, etc.).
- Consult the wider literature and provide additional citations to give background, support, and add to the information content of your popular article.
- Here is a recent example of a popular article with a strong conservation focus: <https://theconversation.com/plants-are-going-extinct-up-to-350-times-faster-than-the-historical-normal-122255>
- Provide up to three relevant images (and acknowledge sources appropriately).
- Hyperlinks that allow further reading can be used (links to other *The Conversation* articles and peer-reviewed material encouraged; no links to Wikipedia)
- Reports must contain formatted citations and a reference list.
- Your report must appeal to the right audience (intelligent, educated, curious – i.e. report should not be dumbing things down).
- The citation for the original research upon which your article is based must be provided at the end of your article.
- Reports must be submitted with a TurnItIn report (please consult Macquarie University’s policy with regards to Academic conduct, and specifically plagiarism (see [this link](#) for further information on plagiarism). TurnItIn cross-checks your assignments against a vast resource of information for verbatim copying of text.

Specific details that should be addressed in your report are:

- What is the conservation issue that researchers are addressing in the scientific paper that you are reporting on? Why is it significant and attracting media attention, i.e. 'so what'? Give a brief background using a broader literature.
- Your popular article must accurately reflect the research article it is based on.
- Obviously scientific methods cannot be described in detail within a popular article, but is excluding the methods creating a false image of what was performed, or is it adequately represented in your article?
- Does your popular article reflect a sound conclusion, i.e. overall synthesis, of what was found in the research?

When writing your article **avoid personal opinion and vague, general statements.** Back up all statements with references as you will be **largely assessed on scientific content and research capabilities.**

## Delivery and Resources

### Coronavirus (COVID-19) Update

Any references to on-campus delivery below may no longer be relevant due to COVID-19.

Please check here for updated delivery information: [https://ask.mq.edu.au/account/pub/display/unit\\_status](https://ask.mq.edu.au/account/pub/display/unit_status)

**Attendance at weekly lectures and tutorials is highly encouraged** to enable face-to-face discussions with the invited speakers, interact with other students and enhance your learning experience. The lectures in this unit are entirely comprised of invited expert researchers who are active and renown in their fields, offering an excellent opportunity to connect with a diversity of researchers and expand knowledge.

Students will need access to a computer and basic office software (e.g. Microsoft Office or OpenOffice) to complete assessment tasks. An Internet browser will also be required to search for background information, for assignments and to complete online exercises and enable online course participation. Some tutorials may require a computer, which may be provided if needed. Course content and discussion boards etc. will be available through iLearn

The set, **compulsory** text required for this unit is: *Austral Ark: The State of Wildlife in Australia and New Zealand (2015) Eds. A Stow, N Maclean, G. Holwell. Cambridge University Press.* The text book is available for purchase on campus at the Co-op bookstore and an e-version is available via MQ's library.

### Other useful references:

Attiwill, P. & B. Wilson, Ecology: an Australian perspective. Oxford University Press, New York. 648 pp.

Burgman, M. and Lindenmayer, D. (1998): Conservation Biology for the Australian



Environment. Surrey Beatty & Sons, Sydney

Krebs, C.J. 1994. Ecology: the experimental analysis of distribution and abundance. 4th ed., Harper, New York. 800 pp

## Unit Schedule

### Coronavirus (COVID-19) Update

The unit schedule/topics and any references to on-campus delivery below may no longer be relevant due to COVID-19. Please consult [iLearn](#) for latest details, and check here for updated delivery information: [https://ask.mq.edu.au/account/pub/display/unit\\_status](https://ask.mq.edu.au/account/pub/display/unit_status)

Week	Date	Topic	Lecturer	Email	Autral Ark Chapter
1	24/ 2/20	Introduction to conservation in Australia and Unit summary	Jaco Le Roux/ Dave Nipperess	<a href="mailto:david.nipperess@mq.edu.au">david.nipperess@mq.edu.au</a>	1 to 3
2	2/3/ 20	Groundwater life and its conservation	Grant Hose	<a href="mailto:grant.hose@mq.edu.au">grant.hose@mq.edu.au</a>	24
3	9/3/ 20	Plant invasions and conservation	Rachael Gallagher	<a href="mailto:rachael.gallagher@mq.edu.au">rachael.gallagher@mq.edu.au</a>	6 to 7
4	16/ 3/20	Biological control	Jaco Le Roux	<a href="mailto:jaco.leroux@mq.edu.au">jaco.leroux@mq.edu.au</a>	6 to 7
5	23/ 3/20	Animal invasions and Australian biodiversity	Rick Shine	<a href="mailto:rick.shine@mq.edu.au">rick.shine@mq.edu.au</a>	TBA
6	30/ 3/20	Applying evolution and genetics to Australian conservation	Rachael Dudaniec	<a href="mailto:rachael.dudaniec@mq.edu.au">rachael.dudaniec@mq.edu.au</a>	other
7	6/4/ 20	Urban ecology and biodiversity conservation	Alessandro Ossola	<a href="mailto:alessandro.ossola@mq.edu.au">alessandro.ossola@mq.edu.au</a>	21
BREAK					
8	27/ 4/20	Impacts of climate change on flora and fauna	Linda Beaumont	<a href="mailto:linda.beaumont@mq.edu.au">linda.beaumont@mq.edu.au</a>	4
9	4/5/ 20	Environmental monitoring and biodiversity assessment	Anthony Chariton	<a href="mailto:anthony.chariton@mq.edu.au">anthony.chariton@mq.edu.au</a>	various
10	11/ 5/20	Australian reptile conservation and management	Adam Stow	<a href="mailto:adam.stow@mq.edu.au">adam.stow@mq.edu.au</a>	17
11	18/ 5/20	Marine protected areas in Australia	David Slip	<a href="mailto:dslip@zoo.nsw.gov.au">dslip@zoo.nsw.gov.au</a>	21
12	25/ 5/20	Unit summary and feedback	Jaco Le Roux	<a href="mailto:jaco.leroux@mq.edu.au">jaco.leroux@mq.edu.au</a>	none
13	1/6/ 20	Bush Heritage Australia – a collaborative approach to Nature Conservation	Rebecca Spindler	<a href="mailto:rebecca.spindler@bushheritage.org.au">rebecca.spindler@bushheritage.org.au</a>	TBA

## Policies and Procedures

Macquarie University policies and procedures are accessible from [Policy Central \(https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central\)](https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central). 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](#)
- [Grade Appeal Policy](#)
- [Complaint Management Procedure for Students and Members of the Public](#)
- [Special Consideration Policy](#) (**Note:** *The Special Consideration Policy is effective from 4 December 2017 and replaces the Disruption to Studies Policy.*)

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

If you would like to see all the policies relevant to Learning and Teaching visit [Policy Central \(https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central\)](https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/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/study/getting-started/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 [ask.mq.edu.au](http://ask.mq.edu.au) or if you are a Global MBA student contact [globalmba.support@mq.edu.au](mailto:globalmba.support@mq.edu.au)

## 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](http://mq.edu.au/learningskills)) provides academic writing resources and study strategies to help you improve your marks and take control of your study.

- [Getting help with your assignment](#)
- [Workshops](#)
- [StudyWise](#)
- [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

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](http://ask.mq.edu.au)

If you are a Global MBA student contact [globalmba.support@mq.edu.au](mailto:globalmba.support@mq.edu.au)

## 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.