



# BIOL3510

## Vertebrate Biology and Behaviour

Session 1, Weekday attendance, North Ryde 2021

*Archive (Pre-2022) - Department of Biological Sciences*

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#### Disclaimer

Macquarie University has taken all reasonable measures to ensure the information in this publication is accurate and up-to-date. However, the information may change or become out-dated as a result of change in University policies, procedures or rules. The University reserves the right to make changes to any information in this publication without notice. Users of this publication are advised to check the website version of this publication [or the relevant faculty or department] before acting on any information in this publication.

#### Notice

As part of [Phase 3 of our return to campus plan](#), most units will now run tutorials, seminars and other small group activities on campus, and most will keep an online version available to those students unable to return or those who choose to continue their studies online.

To check the availability of face-to-face activities for your unit, please go to [timetable viewer](#). To check detailed information on unit assessments visit your unit's iLearn space or consult your unit convenor.

## General Information

Unit convenor and teaching staff

Culum Brown

[culum.brown@mq.edu.au](mailto:culum.brown@mq.edu.au)

Credit points

10

Prerequisites

130cp at 1000 level or above including BIOL262 or BIOL208 or (BIOL2310 or BIOL228) or (BIOL2210 or BIOL229)

Corequisites

Co-badged status

Unit description

Evolution is a dynamic process that has occurred over many millions of years (deep evolution) and continues to this day (contemporary evolution) shaping all aspects of vertebrate biology. This unit considers the major events in vertebrate evolution: invertebrate chordate to vertebrate; jawless to jawed; water to land; ectothermy to endothermy; and land to air. The newly emerging synthesis of evolutionary and developmental biology is having considerable impact on current vertebrate evolutionary theory, as are molecular techniques for constructing phylogenies. These topics are discussed in relation to deep and contemporary evolution of vertebrate groups. Lecture topics also discuss the main traits associated with each group of vertebrates including anatomy, physiology, brains and behaviour. The practical work reinforces the lectures by focussing on the comparative anatomy, morphology and behaviour of representative vertebrate groups.

## 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:** Apply taxonomic nomenclature to vertebrate groups

**ULO2:** Relate anatomical and behavioural traits to the diversity of key vertebrate species

**ULO3:** Associate the major steps in vertebrate evolution to behaviour, body form and physiological function

**ULO4:** Evaluate different methods for determining evolutionary relationships

**ULO5:** Classify vertebrate behaviour to functional roles and interactions at community levels

**ULO6:** Communicate scientific information relevant to vertebrate biology in oral and in written format

## General Assessment Information

### Academic Honesty – please read, as this is very important

Presenting the work of another person as one's own is a serious breach of the University's rules and carries significant penalties. The University's Academic Honesty Policy can be found at [http://www.mq.edu.au/policy/docs/academic\\_honesty/policy.html](http://www.mq.edu.au/policy/docs/academic_honesty/policy.html)

In this unit, we will be checking written work for plagiarism using TURNITIN. Penalties for plagiarism may include a zero mark for the assignment or in more extreme cases, failure of the unit. Plagiarism WILL be noted on your academic record. Full details of penalties can be found at [http://www.mq.edu.au/policy/docs/academic\\_honesty/schedule\\_penalties.html](http://www.mq.edu.au/policy/docs/academic_honesty/schedule_penalties.html)

### Extensions, penalties and disruptions to studies

Late assignments will attract a penalty of **10%** of the total marks allocated to the exercise per day. You may hand in your work after the due date and escape penalty only if you have an acceptable reason (usually a medical certificate). Discuss your problem with the Lecturer as early as possible before the due date, however note that all requests for extensions MUST be submitted using the online form: [ask.mq.edu.au](http://ask.mq.edu.au).

Information about the Disruptions to Studies policy and procedure is online at Policy Central: [http://www.mq.edu.au/policy/docs/disruption\\_studies/procedure.html](http://www.mq.edu.au/policy/docs/disruption_studies/procedure.html).

Information on managing your Disruptions to Studies: [http://students.mq.edu.au/student\\_admin/manage\\_your\\_study\\_program/disruption\\_to\\_studies/](http://students.mq.edu.au/student_admin/manage_your_study_program/disruption_to_studies/)

## Assessment Tasks

Name	Weighting	Hurdle	Due
<a href="#">Prac Report</a>	20%	No	24/05/2021
<a href="#">Science Communication</a>	10%	No	29/03/2021
<a href="#">Prac Notes</a>	20%	No	31/05/2021
<a href="#">Weekly activities</a>	10%	No	04/06/2021

Name	Weighting	Hurdle	Due
<u>Exam</u>	40%	No	TBA

## Prac Report

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

Indicative Time on Task <sup>2</sup>: 30 hours

Due: **24/05/2021**

Weighting: **20%**

The practical report requires your utmost attention during both the 'rat dissection' and 'wildlife dissection' practicals. As a class, we will be examining the relationship between an organism's internal morphology and its ecology. The work will culminate in you producing a scientific paper that places these findings in an evolutionary context. Finer details on the details of the practical exercises and the report to be submitted will be provided on iLearn.

On successful completion you will be able to:

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- Relate anatomical and behavioural traits to the diversity of key vertebrate species
- Associate the major steps in vertebrate evolution to behaviour, body form and physiological function
- Evaluate different methods for determining evolutionary relationships
- Classify vertebrate behaviour to functional roles and interactions at community levels
- Communicate scientific information relevant to vertebrate biology in oral and in written format

## Science Communication

Assessment Type <sup>1</sup>: Media presentation

Indicative Time on Task <sup>2</sup>: 10 hours

Due: **29/03/2021**

Weighting: **10%**

Australia is a country of extremes and many of our animals are superbly adapted to cope. Working in small groups, students will pick an Australian native animal to study and highlight the key adaptations that have enabled that animal to live in the harsh Australian environment. The group will put together a science communication project to present their findings to the class.

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## Prac Notes

Assessment Type <sup>1</sup>: Lab book

Indicative Time on Task <sup>2</sup>: 30 hours

Due: **31/05/2021**

Weighting: **20%**

As a good scientist it is paramount that you learn to keep an accurate record of your experiments and activities. This usually takes the form of a lab book. Throughout this course you will be exposed to a series of lab exercises which involves examination of a LOT of different material. These lab notes should not only consolidate your understanding of each prac but also provide a good resource for review. (I still have my lab notes from my Vertebrate Evolution course from 1993!) It is expected that you will create a word document in which you will paste pictures, diagrams and notes that you take during the practical sessions. The lab “book” will be submitted via iLearn for review after prac 5 and prac 10, but will be reviewed during each prac session.

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## Weekly activities

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

Indicative Time on Task <sup>2</sup>: 6 hours

Due: **04/06/2021**

Weighting: **10%**

You will demonstrate your understanding of important concepts and current themes in Vertebrate evolution

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## Exam

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

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

Due: **TBA**

Weighting: **40%**

The final exam will cover both lecture and practical material

On successful completion you will be able to:

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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

Suggest students read the text:

Pough et al Vertebrate Life

10th Edition

## 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](#)
- [Grade Appeal Policy](#)
- [Complaint Management 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 [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.

## Changes since First Published

Date	Description
03/02/2021	SC linkage