BIOL372

Marine Birds and Mammals

S2 Day 2014

Dept of Biological Sciences

Contents

General Information

Unit convenor and teaching staff
Unit Convenor
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Credit points
3

Prerequisites
39cp including BIOL227(P)

Corequisites

Co-badged status

Unit description
Marine predators are ecologically important components of marine ecosystems and this unit examines their importance by exploring all aspects of their biology. We examine how marine mammals and seabirds evolved, and what adaptations they have made in returning to the marine environment. Their behaviour and ecology is reviewed and we also investigate how these might necessarily be applied to their conservation and management. Current issues in conservation of marine birds and mammals, with an Australasian focus, receive special attention.

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:

Understand advanced evolutionary principles

Have a comprehensive insight into the behaviour and ecology of marine predators and their role in marine ecosystems

Analyse results from practical classes and field work

Undertake literature searches and evaluate literature

Write scientific reports

Plan and safely undertake field collection of data

Assessment Tasks

Name	Weighting	Due
Final examination	50%	Exam Period
Practical reports	30%	Monday-following week
Major report: Pelagic Trip	20%	Nov 7

Final examination

Due: **Exam Period**
Weighting: **50%**

-

On successful completion you will be able to:

- Understand advanced evolutionary principles
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- Undertake literature searches and evaluate literature

Practical reports

Due: **Monday-following week**
Weighting: **30%**

The practical classes will be assessed on the basis of practical report that will be due in to the SCIENCE centre generally in the following week (Monday). The format will vary according to the

content each week and therefore you must be sure to follow the instructions accordingly.

On successful completion you will be able to:

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- Analyse results from practical classes and field work
- Write scientific reports

Major report: Pelagic Trip

Due: **Nov 7**
Weighting: **20%**

Students will be divided into groups and survey 'blind' to the other groups. The results will be collated at the end of the trip and compared in the report.

On successful completion you will be able to:

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Delivery and Resources

CLASSES

Lectures

- Mondays 1700 to 1800 (E7B 263) and
- Tuesday 1400 to 1500 (W6B 338) (50mins each).

Practicals (1000 to 1300 alternate 1400 to 1700 in F5A 428 glasshouse unless indicated)

- Prac 1 - Challenge of Aquatic Living 1 (sea bird dissection) - Monday 11/08
- Prac 2 - Challenge of Aquatic Living 2 (mammals - pool prac) - Monday 25/08
- Prac 3 - Reconstructing diet (fish dissection) - Monday 01/09
- Prac 4 - Population modelling 1 (lab-based) - Monday 08/09

- Prac 5 - Population modelling 2 (lab-based) - Monday 15/09
- Prac 6 - Animal behaviour (Taronga zoo) - Monday 20/10
- Pelagic field trip 1 on Sunday 05/10 **OR** Pelagic field trip 2 on Sunday 19/10

REQUIRED AND RECOMMENDED TEXTS AND/OR MATERIALS

The textbook for BIOL372 is

- *Marine Mammal Biology: an evolutionary approach* 1st edition, by Rus Hoelzel, 2002. Published by Blackwell.

This is available at the Co-op bookshop but not required.

Other recommended readings will be provided on the BIOL372 website.

UNIT WEBPAGE AND TECHNOLOGY USED AND REQUIRED

Unit Web Page

Important information, announcements, and learning materials are made available via iLearn: click on the “online units” tab on the MQ home page or go directly to www.learn.mq.edu.au

Technology Used and Required

Students will need access to a computer and basic office software (eg. Microsoft Office or OpenOffice) to complete assessment tasks.

Unit Schedule

Lecture Schedule

Week	Lecturer	Lecture
1	Harcourt Harcourt	1. Diversity 2. Evolution 1
2	Harcourt Harcourt	3. Evolution 2 4. The Challenge of Aquatic Living 1
3	Harcourt Harcourt	5. The Challenge of Aquatic Living 2 6. The Challenge of Aquatic Living 3

4	Harcourt Harcourt	7. The Challenge of Aquatic Living 4 8. The Challenge of Aquatic Living 5
5	Harcourt Harcourt	9. Movement 1 10. Movement 2
6	Harcourt Harcourt	11. Feeding Ecology 1 12. Feeding Ecology 2
7	Boomer Boomer	13. Population Genetics 1 14. Population Genetics 2
		Mid Semester Break
8	Harcourt	15. Energetics
9	Harcourt Harcourt	16. Life History 1: Life History Traits 17. Life History 2: Reproductive Strategies
10	Harcourt Harcourt	18. Social Behaviour 1 19. Social Behaviour 2
11	VIDEO Harcourt	20. Social Behaviour: Birds **(VIDEO)** 21. Cognition
12	Harcourt Harcourt	22. Fisheries 1 23. Fisheries 2
13	Harcourt Harcourt	24. Monitors 25. Conservation

Practical Schedule

Date	Practical	Due date
11/08/2014	1. Challenge of Aquatic Living 1: Birds (F5A 428)	18/08/2014
25/08/2014	2. Challenge of Aquatic Living 2: Mammals (MQ Pool)	1/09/2014

01/09/2014	3. Reconstructing Diet (F5A 428)	08/09/2014
Field trip 1 on Sunday 05/10 **Field trip 2 on Sunday 19/10**	**Pelagic field trip** Pick up at Mosman Wharf (6:45 am) or Rose Bay Wharf (7am)	07/11/2014
08/09/2014	4. Population modelling 1: population growth (F5A 428)	15/09/2014
15/09/2014	5. Population modelling 2: small populations (F5A 428)	22/09/2014
20/10/2014	6. Animal behaviour (Taronga Zoo)	27/10/2014

Learning and Teaching Activities

Learning and Teaching Activities

On completing the course, students should be able to: • Understand advanced evolutionary principles • Have a comprehensive insight into the behaviour and ecology of marine predators and their role in marine ecosystems. • Analyse results from practical classes and field work. • Undertake literature searches and evaluate literature. • Write scientific reports. • Plan and safely undertake field collection of data.

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/

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

Capable of Professional and Personal Judgement and Initiative

We want our graduates to have emotional intelligence and sound interpersonal skills and to demonstrate discernment and common sense in their professional and personal judgement. They will exercise initiative as needed. They will be capable of risk assessment, and be able to handle ambiguity and complexity, enabling them to be adaptable in diverse and changing environments.

This graduate capability is supported by:

Learning outcomes

- Have a comprehensive insight into the behaviour and ecology of marine predators and their role in marine ecosystems
- Analyse results from practical classes and field work
- Undertake literature searches and evaluate literature
- Write scientific reports
- Plan and safely undertake field collection of data

Commitment to Continuous Learning

Our graduates will have enquiring minds and a literate curiosity which will lead them to pursue knowledge for its own sake. They will continue to pursue learning in their careers and as they participate in the world. They will be capable of reflecting on their experiences and relationships with others and the environment, learning from them, and growing - personally, professionally and socially.

This graduate capability is supported by:

Learning outcomes

- Analyse results from practical classes and field work
- Undertake literature searches and evaluate literature
- Plan and safely undertake field collection of data

Discipline Specific Knowledge and Skills

Our graduates will take with them the intellectual development, depth and breadth of knowledge, scholarly understanding, and specific subject content in their chosen fields to make them competent and confident in their subject or profession. They will be able to demonstrate, where relevant, professional technical competence and meet professional standards. They will be able to articulate the structure of knowledge of their discipline, be able to adapt discipline-specific knowledge to novel situations, and be able to contribute from their discipline to inter-disciplinary solutions to problems.

This graduate capability is supported by:

Learning outcomes

- Understand advanced evolutionary principles
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Critical, Analytical and Integrative Thinking

We want our graduates to be capable of reasoning, questioning and analysing, and to integrate and synthesise learning and knowledge from a range of sources and environments; to be able to critique constraints, assumptions and limitations; to be able to think independently and systemically in relation to scholarly activity, in the workplace, and in the world. We want them to have a level of scientific and information technology literacy.

This graduate capability is supported by:

Learning outcomes

- Understand advanced evolutionary principles
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Problem Solving and Research Capability

Our graduates should be capable of researching; of analysing, and interpreting and assessing data and information in various forms; of drawing connections across fields of knowledge; and they should be able to relate their knowledge to complex situations at work or in the world, in order to diagnose and solve problems. We want them to have the confidence to take the initiative in doing so, within an awareness of their own limitations.

This graduate capability is supported by:

Learning outcomes

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Creative and Innovative

Our graduates will also be capable of creative thinking and of creating knowledge. They will be imaginative and open to experience and capable of innovation at work and in the community. We want them to be engaged in applying their critical, creative thinking.

This graduate capability is supported by:

Learning outcomes

- Have a comprehensive insight into the behaviour and ecology of marine predators and their role in marine ecosystems
- Analyse results from practical classes and field work
- Undertake literature searches and evaluate literature
- Write scientific reports
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Effective Communication

We want to develop in our students the ability to communicate and convey their views in forms effective with different audiences. We want our graduates to take with them the capability to read, listen, question, gather and evaluate information resources in a variety of formats, assess, write clearly, speak effectively, and to use visual communication and communication technologies as appropriate.

This graduate capability is supported by:

Learning outcomes

- Analyse results from practical classes and field work
- Undertake literature searches and evaluate literature
- Write scientific reports
- Plan and safely undertake field collection of data

Engaged and Ethical Local and Global citizens

As local citizens our graduates will be aware of indigenous perspectives and of the nation's historical context. They will be engaged with the challenges of contemporary society and with knowledge and ideas. We want our graduates to have respect for diversity, to be open-minded, sensitive to others and inclusive, and to be open to other cultures and perspectives: they should have a level of cultural literacy. Our graduates should be aware of disadvantage and social justice, and be willing to participate to help create a wiser and better society.

This graduate capability is supported by:

Learning outcomes

- Have a comprehensive insight into the behaviour and ecology of marine predators and their role in marine ecosystems
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Socially and Environmentally Active and Responsible

We want our graduates to be aware of and have respect for self and others; to be able to work with others as a leader and a team player; to have a sense of connectedness with others and country; and to have a sense of mutual obligation. Our graduates should be informed and active participants in moving society towards sustainability.

This graduate capability is supported by:

Learning outcomes

- Have a comprehensive insight into the behaviour and ecology of marine predators and their role in marine ecosystems
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Changes since First Published

Date	Description
13/08/2014	added in due dates
07/08/2014	lecture location updated
28/07/2014	m
23/07/2014	m
09/07/2014	Dates, times and room locations corrected