

# BIOL260

# **Science of Sex**

S2 Day 2014

Dept 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.

## **General Information**

Unit convenor and teaching staff

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Credit points

3

Prerequisites

12cp or admission to GCertBiotech

Corequisites

Co-badged status

Unit description

Topics related to sex pervade our culture, media, politics, relationships and everyday life. Despite this, many of us have never had the opportunity to learn why sex evolved. What are the real differences between males and females? What is the chemistry that makes partners attractive? Why are the sexual strategies and behaviours of different species so diverse? What hormones control our maturation, reproductive cycles and pregnancy? This unit takes a broad approach, using examples (some quite bizarre) from the animal and plant worlds. At the same time, we cover in depth the sexual biology and behaviour of our own intriguing species.

## 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 and use correct biological terminology

Explain the difference between asexual and sexual reproduction, and have an understanding of why sexual reproduction has evolved

Identify the various animal (and plant) mating systems and the strategies used by males and females from each

Recall specific examples of species from each of the mating systems presented during lectures

Outline and understand evolutionary processes, especially in relation to sexual selection (rather than natural selection)

Read and understand scientific papers in the sexual selection literature

Work in pairs to create a poster that succinctly summarises information on a sexual selection topic

## **Assessment Tasks**

Name	Weighting	Due
Textbook reading/questions	20%	Every Sunday
Science skills quiz	5%	17/08
Quiz 1	20%	21/09
Quiz 2	15%	02/11
Quiz 3	10%	23/11
Poster assessment	25%	26/10
Peer review	5%	06/11

## Textbook reading/questions

Due: **Every Sunday** Weighting: **20%** 

You will be required to read the relevant section/s of the textbook for each topic (11 in total), complete a series of questions and submit them online for marking. Each submission is worth 2%, up to a maximum of 20%.

On successful completion you will be able to:

- Understand and use correct biological terminology
- Explain the difference between asexual and sexual reproduction, and have an understanding of why sexual reproduction has evolved

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• Identify the various animal (and plant) mating systems and the strategies used by males

and females from each

Recall specific examples of species from each of the mating systems presented during

lectures

Outline and understand evolutionary processes, especially in relation to sexual selection

(rather than natural selection)

Read and understand scientific papers in the sexual selection literature

## Science skills quiz

Due: 17/08 Weighting: 5%

Online quiz. 10 questions, 60 mins. The quiz will test your ability in various science skills eg. referencing, plagiarism, basic writing, library searches. You have 3 attempts, and your highest

score will be recorded.

On successful completion you will be able to:

· Understand and use correct biological terminology

#### Quiz 1

Due: **21/09** 

Weighting: 20%

90-min quiz compiled of 120 marks and completed in iLearn. Will test your knowledge of the animal reproduction course content (lecture 4-18).

On successful completion you will be able to:

Understand and use correct biological terminology

• Explain the difference between asexual and sexual reproduction, and have an

understanding of why sexual reproduction has evolved

Identify the various animal (and plant) mating systems and the strategies used by males

and females from each

· Recall specific examples of species from each of the mating systems presented during

lectures

• Outline and understand evolutionary processes, especially in relation to sexual selection

(rather than natural selection)

## Quiz 2

Due: 02/11

Weighting: 15%

67-min quiz is compiled of 90 marks and completed in iLearn. Will test your knowledge of the human reproduction course content (lectures 19-30).

On successful completion you will be able to:

- Understand and use correct biological terminology
- Explain the difference between asexual and sexual reproduction, and have an understanding of why sexual reproduction has evolved
- Identify the various animal (and plant) mating systems and the strategies used by males and females from each
- Recall specific examples of species from each of the mating systems presented during lectures
- Outline and understand evolutionary processes, especially in relation to sexual selection (rather than natural selection)

#### Quiz 3

Due: 23/11

Weighting: 10%

45-min quiz compiled of 60 marks and completed in iLearn. Will test your knowledge of the plant reproduction and guest lecture course content (lectures 31-39).

On successful completion you will be able to:

- Understand and use correct biological terminology
- Explain the difference between asexual and sexual reproduction, and have an understanding of why sexual reproduction has evolved
- Identify the various animal (and plant) mating systems and the strategies used by males and females from each
- Recall specific examples of species from each of the mating systems presented during lectures
- Outline and understand evolutionary processes, especially in relation to sexual selection (rather than natural selection)

#### Poster assessment

Due: **26/10** Weighting: **25%** 

Based on a real data set, the idea is to take on the role of the researcher and present the research findings as if they are your own. There are three study species to choose from, and the assessment is done in pairs.

On successful completion you will be able to:

- Understand and use correct biological terminology
- Explain the difference between asexual and sexual reproduction, and have an understanding of why sexual reproduction has evolved
- Identify the various animal (and plant) mating systems and the strategies used by males and females from each
- Recall specific examples of species from each of the mating systems presented during lectures
- Outline and understand evolutionary processes, especially in relation to sexual selection (rather than natural selection)
- Read and understand scientific papers in the sexual selection literature
- Work in pairs to create a poster that succinctly summarises information on a sexual selection topic

#### Peer review

Due: **06/11** Weighting: **5%** 

You will be required to assess five other students' posters, and your ability to review will be graded. This is done at the on-campus poster session, and attendance is manditory.

On successful completion you will be able to:

- Understand and use correct biological terminology
- Explain the difference between asexual and sexual reproduction, and have an understanding of why sexual reproduction has evolved
- Identify the various animal (and plant) mating systems and the strategies used by males and females from each
- Recall specific examples of species from each of the mating systems presented during lectures
- Outline and understand evolutionary processes, especially in relation to sexual selection (rather than natural selection)
- Read and understand scientific papers in the sexual selection literature
- Work in pairs to create a poster that succinctly summarises information on a sexual selection topic

# **Delivery and Resources**

## **CLASSES**

#### **Timetable**

<u>Lectures:</u> Three lectures per week, all available online in iLearn

Lecture 1 Tuesday 11am-12pm X5B 100 (T1)

Lecture 2 Tuesday 4pm-5pm X5B 100 (T1)

Lecture 3 Thursday 9am-11am X5B 100 (T1)

#### Weekly Tutorial:

1. Tutorial Thursdays 1pm – 2pm X5B 100 (T1)

#### Required unit materials

#### Textbook

Barry, K.L. & Holwell, G.I. 2012. *The science of sex (third edition)*. McGraw-Hill Publishers, Sydney.

This textbook was designed specifically for BIOL260, and you can purchase a hardcopy of the book (~\$80) from the University Coop Bookshop or an e-book (~\$55) direct from the publisher's website (https://create.mcgraw-hill.com/shop/#/catalog/details/?isbn=9781121500389). Much of the lecture material corresponds with chapters in the text, and the associated readings and questions are taken directly from this book. There are also many copies held in the reserve section of the library. The second and third editions are both suitable for this unit.

#### Software

The poster file must be created in <u>PowerPoint</u>, <u>Keynote or Open Office only</u>, so please make sure you own or have access to one of these software programs. You are also expected to create graphs for your poster presentation, so you should own or have access to Excel or another similar program.

# UNIT WEBPAGE AND TECHNOLOGY USED AND REQUIRED

#### Website

iLearn http://ilearn.mq.edu.au will be the principle method of communication in this unit, and you

should be checking it regularly (<u>every 3 days at absolute minimum</u>). Some communication may also occur via student email - if you have a personal email account that you check more often, please forward your student email to that account.

You are expected to use iLearn for:

- · Regularly checking subject announcements;
- Discussing lectures and readings with lecturers/tutors and other students;
- Downloading lecture materials;
- Downloading reference materials;
- · Completing/submitting assessment tasks (the online quizzes require a stable/fast internet connection);
- · Receiving feedback for assessment tasks;
- Checking your grades.

#### How do you log in?

Use your Macquarie OneID to login. If you are having problems logging in after ensuring you have entered your username and password correctly, you should contact Student IT Help, Email: <a href="mailto:help@mq.edu.au">help@mq.edu.au</a>, Phone: (02) 9850 4357 (in Sydney) or 1 800 67 4357 (toll-free outside Sydney).

#### WHAT HAS CHANGED?

There is no longer a final exam - instead there are three online quizzes. The tutorial format has been changed slightly so that students are able to discuss the set questions before they submit them for assessment. The poster is now done in pairs..

## **Unit Schedule**

Lecture	Week	Lecturer	Broad topic	Specific topic
1	1	Kate B	Intro	Unit outline
2	1	Kate B	Intro	Assessment
3	1	Kate B	Intro	Evolution
4	2	Kate B	Animal	Why have sex? <sup>T1</sup>
5	2	Kate B	Animal	Intro to animal reproduction
6	2	Kate B	Animal	Animal mating systems <sup>T2</sup>

7         3         Kate B         Animal         Sexual selection & sax roles 13           8         3         Kate B         Animal         Mate choice           9         3         Kate B         Animal         Mate choice           10         4         Kate B         Animal         Sexual signals II           11         4         Anne W         Animal         Sexual signals II           12         4         Kate B         Animal         Sexual signals III           13         5         Kate B         Animal         Sexual signals III           14         5         Kate B         Animal         Multiple mating & genitalia           14         5         Kate B         Animal         Sperm competition 19           15         5         Kate B         Animal         Sperm competition 19           16         Kate B         Animal         Sexual conflict & SAC 18           17         6         Kate B         Animal         Sexual conflict & SAC 18           17         6         Kate B         Animal         Sexual conflict & SAC 18           19         7         Mike G         Human         Gornat development 17           20         7					
9         3         Kate B         Animal         Mate choice           10         4         Kate B         Animal         Sexual signals I T4           11         4         Anne W         Animal         Sexual signals III           12         4         Kate B         Animal         Sexual signals III           13         5         Kate B         Animal         Multiple mating & genitalia           14         5         Kate B         Animal         Sperm competition T5           15         5         Kate B         Animal         Cryptic male & female choice T1           16         6         Kate B         Animal         Sexual conflict & SAC T9           17         6         Kate B         Animal         Sexual cannibalism           18         6         Malin A         Animal         Current views on sex roles           19         7         Mike G         Human         Sex determination           20         7         Mike G         Human         Development*7           21         7         Mike G         Human         Human Hormones, cycles, puberty, pregnancy           23         8         Mike G         Human         Sexually transmitted infections*8     <	7	3	Kate B	Animal	Sexual selection & sex roles <sup>T3</sup>
10	8	3	Kate B	Animal	Mate competition
11         4         Anne W         Animal         Sexual signals III           12         4         Kate B         Animal         Sexual signals III           13         5         Kate B         Animal         Multiple mating & genitalia           14         5         Kate B         Animal         Sperm competition TS           15         5         Kate B         Animal         Cryptic male & female choice TS           16         6         Kate B         Animal         Sexual conflict & SAC TS           17         6         Kate B         Animal         Sexual conflict & SAC TS           18         6         Malin A         Animal         Current views on sex roles           19         7         Mike G         Human         Sex determination           20         7         Mike G         Human         Development of human genitalia T7           21         7         Mike G         Human         Development of human genitalia T7           22         8         Mike G         Human         Gametes, fertilisation, contraception           24         8         Mike G         Human         Sexually transmitted infections T8           25         9         Mike G         Human	9	3	Kate B	Animal	Mate choice
12         4         Kate B         Animal         Sexual signals III           13         5         Kate B         Animal         Multiple mating & genitalia           14         5         Kate B         Animal         Sperm competition TS           15         5         Kate B         Animal         Cryptic male & female choice TS           16         6         Kate B         Animal         Sexual conflict & SACTG           17         6         Kate B         Animal         Sexual conflict & SACTG           18         6         Malin A         Animal         Current views on sex roles           19         7         Mike G         Human         Sex determination           20         7         Mike G         Human         Gonad development T7           21         7         Mike G         Human         Development of human genitalia T7           22         8         Mike G         Human         Hormones, cycles, puberty, pregnancy           23         8         Mike G         Human         Sexually transmitted infections T8           25         9         Mike G         Human         Love, neurobiology and orgasm T9           26         9         Mike G         Human	10	4	Kate B	Animal	Sexual signals I <sup>T4</sup>
13         5         Kate B         Animal         Multiple mating & genitalia           14         5         Kate B         Animal         Sperm competition TS           15         5         Kate B         Animal         Cryptic male & female choice TS           16         6         Kate B         Animal         Sexual conflict & SACTO           17         6         Kate B         Animal         Sexual cannibalism           18         6         Malin A         Animal         Current views on sex roles           19         7         Mike G         Human         Sex determination           20         7         Mike G         Human         Gonad development <sup>T7</sup> 21         7         Mike G         Human         Development of human genitalia <sup>T7</sup> 22         8         Mike G         Human         Hormones, cycles, puberty, pregnancy           23         8         Mike G         Human         Sexually transmitted infections TB           25         9         Mike G         Human         Love, neurobiology and orgasm TB           26         9         Mike G         Human         Human mate choice           27         9         Vince R         Human	11	4	Anne W	Animal	Sexual signals II
14         5         Kate B         Animal         Sperm competition <sup>TS</sup> 15         5         Kate B         Animal         Cryptic male & female choice <sup>TS</sup> 16         6         Kate B         Animal         Sexual conflict & SAC <sup>TO</sup> 17         6         Kate B         Animal         Sexual cannibalism           18         6         Malin A         Animal         Current views on sex roles           19         7         Mike G         Human         Sex determination           20         7         Mike G         Human         Gonad development <sup>T7</sup> 21         7         Mike G         Human         Development of human genitalia <sup>T7</sup> 22         8         Mike G         Human         Hormones, cycles, puberty, pregnancy           23         8         Mike G         Human         Gametes, fertilisation, contraception           24         8         Mike G         Human         Love, neurobiology and orgasm <sup>TD</sup> 25         9         Mike G         Human         Human mate choice           27         9         Vince R         Human         MHC and MCC           28         10         Andy B         Human         Se	12	4	Kate B	Animal	Sexual signals III
15         5         Kate B         Animal         Cryptic male & female choice T5           16         6         Kate B         Animal         Sexual conflict & SACT6           17         6         Kate B         Animal         Sexual cannibalism           18         6         Malin A         Animal         Current views on sex roles           19         7         Mike G         Human         Sex determination           20         7         Mike G         Human         Gonad development T7           21         7         Mike G         Human         Development of human genitalia T7           22         8         Mike G         Human         Hormones, cycles, puberty, pregnancy           23         8         Mike G         Human         Gametes, fertilisation, contraception           24         8         Mike G         Human         Sexually transmitted infections T8           25         9         Mike G         Human         Love, neurobiology and orgasm T9           26         9         Mike G         Human         Human MHC and MCC           27         9         Vince R         Human         Sexual diversity I <sup>T10</sup>	13	5	Kate B	Animal	Multiple mating & genitalia
16 6 Kate B Animal Sexual conflict & SAC <sup>T6</sup> 17 6 Kate B Animal Sexual cannibalism  18 6 Malin A Animal Current views on sex roles  19 7 Mike G Human Sex determination  20 7 Mike G Human Development of human genitalia T7  21 7 Mike G Human Hormones, cycles, puberty, pregnancy  22 8 Mike G Human Gametes, fertilisation, contraception  24 8 Mike G Human Sexually transmitted infections T6  25 9 Mike G Human Love, neurobiology and orgasm T9  26 9 Mike G Human Human mate choice  27 9 Vince R Human MHC and MCC  28 10 Andy B Human Sexual diversity I T10	14	5	Kate B	Animal	Sperm competition <sup>T5</sup>
17 6 Kate B Animal Sexual cannibalism  18 6 Malin A Animal Current views on sex roles  19 7 Mike G Human Sex determination  20 7 Mike G Human Development 17  21 7 Mike G Human Development of human genitalia 17  22 8 Mike G Human Hormones, cycles, puberty, pregnancy  23 8 Mike G Human Gametes, fertilisation, contraception  24 8 Mike G Human Sexually transmitted infections 18  25 9 Mike G Human Love, neurobiology and orgasm 19  26 9 Mike G Human Human mate choice  27 9 Vince R Human MHC and MCC  28 10 Andy B Human Sexual diversity 1110	15	5	Kate B	Animal	Cryptic male & female choice <sup>T5</sup>
18 6 Malin A Animal Current views on sex roles  19 7 Mike G Human Sex determination  20 7 Mike G Human Gonad development <sup>17</sup> 21 7 Mike G Human Development of human genitalia <sup>17</sup> 22 8 Mike G Human Hormones, cycles, puberty, pregnancy  23 8 Mike G Human Gametes, fertilisation, contraception  24 8 Mike G Human Sexually transmitted infections <sup>18</sup> 25 9 Mike G Human Love, neurobiology and orgasm <sup>19</sup> 26 9 Mike G Human Human Human mate choice  27 9 Vince R Human MHC and MCC  28 10 Andy B Human Sexual diversity I <sup>T10</sup>	16	6	Kate B	Animal	Sexual conflict & SAC <sup>T6</sup>
19 7 Mike G Human Sex determination  20 7 Mike G Human Gonad development T7  21 7 Mike G Human Development of human genitalia T7  22 8 Mike G Human Hormones, cycles, puberty, pregnancy  23 8 Mike G Human Gametes, fertilisation, contraception  24 8 Mike G Human Sexually transmitted infections T8  25 9 Mike G Human Love, neurobiology and orgasm T9  26 9 Mike G Human Human mate choice  27 9 Vince R Human MHC and MCC  28 10 Andy B Human Sexual diversity IT10	17	6	Kate B	Animal	Sexual cannibalism
20 7 Mike G Human Gonad development <sup>T7</sup> 21 7 Mike G Human Development of human genitalia <sup>T7</sup> 22 8 Mike G Human Hormones, cycles, puberty, pregnancy  23 8 Mike G Human Gametes, fertilisation, contraception  24 8 Mike G Human Sexually transmitted infections <sup>T8</sup> 25 9 Mike G Human Love, neurobiology and orgasm <sup>T9</sup> 26 9 Mike G Human Human mate choice  27 9 Vince R Human MHC and MCC  28 10 Andy B Human Sexual diversity I <sup>T10</sup>	18	6	Malin A	Animal	Current views on sex roles
21 7 Mike G Human Development of human genitalia <sup>T7</sup> 22 8 Mike G Human Hormones, cycles, puberty, pregnancy  23 8 Mike G Human Gametes, fertilisation, contraception  24 8 Mike G Human Sexually transmitted infections <sup>T8</sup> 25 9 Mike G Human Love, neurobiology and orgasm <sup>T9</sup> 26 9 Mike G Human Human mate choice  27 9 Vince R Human MHC and MCC  28 10 Andy B Human Sexual diversity I <sup>T10</sup>	19	7	Mike G	Human	Sex determination
22 8 Mike G Human Hormones, cycles, puberty, pregnancy  23 8 Mike G Human Gametes, fertilisation, contraception  24 8 Mike G Human Sexually transmitted infections T8  25 9 Mike G Human Love, neurobiology and orgasm T9  26 9 Mike G Human Human mate choice  27 9 Vince R Human MHC and MCC  28 10 Andy B Human Sexual diversity IT10	20	7	Mike G	Human	Gonad development <sup>T7</sup>
23 8 Mike G Human Gametes, fertilisation, contraception  24 8 Mike G Human Sexually transmitted infections <sup>T8</sup> 25 9 Mike G Human Love, neurobiology and orgasm <sup>T9</sup> 26 9 Mike G Human Human mate choice  27 9 Vince R Human MHC and MCC  28 10 Andy B Human Sexual diversity I <sup>T10</sup>	21	7	Mike G	Human	Development of human genitalia <sup>T7</sup>
24 8 Mike G Human Sexually transmitted infections <sup>T8</sup> 25 9 Mike G Human Love, neurobiology and orgasm <sup>T9</sup> 26 9 Mike G Human Human mate choice  27 9 Vince R Human MHC and MCC  28 10 Andy B Human Sexual diversity I <sup>T10</sup>	22	8	Mike G	Human	Hormones, cycles, puberty, pregnancy
25 9 Mike G Human Love, neurobiology and orgasm <sup>T9</sup> 26 9 Mike G Human Human mate choice  27 9 Vince R Human MHC and MCC  28 10 Andy B Human Sexual diversity I <sup>T10</sup>	23	8	Mike G	Human	Gametes, fertilisation, contraception
26 9 Mike G Human Human mate choice  27 9 Vince R Human MHC and MCC  28 10 Andy B Human Sexual diversity I <sup>T10</sup>	24	8	Mike G	Human	Sexually transmitted infections <sup>T8</sup>
27 9 Vince R Human MHC and MCC  28 10 Andy B Human Sexual diversity I <sup>T10</sup>	25	9	Mike G	Human	Love, neurobiology and orgasm <sup>T9</sup>
28 10 Andy B Human Sexual diversity I <sup>T10</sup>	26	9	Mike G	Human	Human mate choice
	27	9	Vince R	Human	MHC and MCC
29 10 Andy B Human Sexual diversity II	28	10	Andy B	Human	Sexual diversity I <sup>T10</sup>
	29	10	Andy B	Human	Sexual diversity II

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30	10	Andy B	Human	Sexual diversity III
31	11	Brian A	Plant	Plant reproduction I <sup>T11</sup>
32	11	Brian A	Plant	Plant reproduction II
33	11	Julia C	Plant	Sexual deception in orchids
34	12		Guest	
35	12		Guest	
36	12	Kate B	Poster session	Poster session <sup>T12</sup>
37	13		Guest	
38	13		Guest	
39	13		Guest	

T1 = topic covered in tutorial 1; T2 = topic covered in tutorial 2; etc.

#### **TUTORIAL SCHEDULE**

Week	Textbook Topic	Assessment Topic
1	Why have sex?	Q&A session
2	Animal Mating Systems	Scientific journals
3	Sexual Selection	Data collection
4	Sexual Signals	Data sets
5	Sperm Competition	Graphs
6	Sexual Conflict	Data analysis
7	Human Reproductive System	Data interpretation
8	Sexually Transmitted Infections	Poster communication

9	Sexual Arousal	Poster examples
10	Sexual Orientation	Poster Q&A
11	Plant Reproduction	Peer review instructions
12^		Poster session, peer review
13		Quiz answers; TEDs surveys

<sup>^</sup> attendance is compulsory; you will receive 0/5 for peer review ability if you do not attend

## **Policies and Procedures**

Macquarie University policies and procedures are accessible from <u>Policy Central</u>. Students should be aware of the following policies in particular with regard to Learning and Teaching:

Academic Honesty Policy <a href="http://mq.edu.au/policy/docs/academic\_honesty/policy.html">http://mq.edu.au/policy/docs/academic\_honesty/policy.html</a>

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 <a href="http://mq.edu.au/policy/docs/grievance\_management/policy.html">http://mq.edu.au/policy/docs/grievance\_management/policy.html</a>

Disruption to Studies Policy <a href="http://www.mq.edu.au/policy/docs/disruption\_studies/policy.html">http://www.mq.edu.au/policy/docs/disruption\_studies/policy.html</a> 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 <u>Learning and Teaching Category</u> 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/

#### **Extensions and penalties**

10% of the mark allocated for each assignment will be deducted per day that any work is submitted late. Only a medical certificate or a letter with appropriate supporting documents outlining other serious, extenuating circumstances can be used to submit an assignment after the due date without penalty. All applications for special consideration or extension must be sought *before the due date* unless this is absolutely impossible (in which case <u>you have 3 days</u>)

from the due date). All applications for extensions of deadlines must be submitted to the unit convenor.

#### **Plagiarism**

Plagiarism involves using the work of another person and presenting it as one's own. Copying out part of any document, audio-visual material or computer-based material, is only acceptable if you use quotation marks, and you must still <u>acknowledge the source</u> of the information (you should <u>always try and restate the information in your own words</u> though, because you will be marked down for use of quotations).

Any of the following acts constitutes plagiarism unless the source of each quotation or piece of borrowed material is clearly acknowledged:

- using or extracting another person's concepts, experimental results, or conclusions
- · summarising another person's work
- submitting substantially the same final version of any material as another student in an assignment where there was collaborative preparatory work
- submitting the same or substantially the same piece of work for two different tasks (self-plagiarism)

A full outline of the revised University Policy on plagiarism can be found on the official website at <a href="http://www.mq.edu.au/policy/docs/academic\_honesty/policy.html">http://www.mq.edu.au/policy/docs/academic\_honesty/policy.html</a>. The website includes a general discussion of plagiarism, definitions, examples drawn from concrete cases, procedures that will be followed by the University in cases of plagiarism, and recommended penalties. Students are expected to familiarise themselves with the website.

Depending on the level of plagiarism, penalties range from a loss of marks to awarding of a zero for the assessment. A note will be added to the student's university file, and particularly extreme cases will be reported to a Faculty disciplinary committee.

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- submitting substantially the same final version of any material as another student in an assignment where there was collaborative preparatory work

 submitting the same or substantially the same piece of work for two different tasks (selfplagiarism)

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## Student Support

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

#### 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 <u>Disability Service</u> 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 <a href="http://informatics.mq.edu.au/hel">http://informatics.mq.edu.au/hel</a>
p/.

When using the University's IT, you must adhere to the <u>Acceptable Use Policy</u>. 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 outcome

· Read and understand scientific papers in the sexual selection literature

#### Assessment tasks

- Textbook reading/questions
- · Poster assessment
- Peer review

## 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

- Identify the various animal (and plant) mating systems and the strategies used by males and females from each
- Recall specific examples of species from each of the mating systems presented during lectures
- Outline and understand evolutionary processes, especially in relation to sexual selection (rather than natural selection)
- Read and understand scientific papers in the sexual selection literature
- Work in pairs to create a poster that succinctly summarises information on a sexual selection topic

#### Assessment tasks

· Textbook reading/questions

- Poster assessment
- · Peer review

## 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 and use correct biological terminology
- Explain the difference between asexual and sexual reproduction, and have an understanding of why sexual reproduction has evolved
- Identify the various animal (and plant) mating systems and the strategies used by males and females from each
- Recall specific examples of species from each of the mating systems presented during lectures
- Outline and understand evolutionary processes, especially in relation to sexual selection (rather than natural selection)
- Read and understand scientific papers in the sexual selection literature
- Work in pairs to create a poster that succinctly summarises information on a sexual selection topic

#### Assessment tasks

- · Textbook reading/questions
- Science skills quiz
- Quiz 1
- Quiz 2
- Quiz 3
- · Poster assessment
- · Peer review

## 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

- Explain the difference between asexual and sexual reproduction, and have an understanding of why sexual reproduction has evolved
- Identify the various animal (and plant) mating systems and the strategies used by males and females from each
- Recall specific examples of species from each of the mating systems presented during lectures
- Outline and understand evolutionary processes, especially in relation to sexual selection (rather than natural selection)
- · Read and understand scientific papers in the sexual selection literature
- Work in pairs to create a poster that succinctly summarises information on a sexual selection topic

#### Assessment tasks

- Textbook reading/questions
- Quiz 1
- Quiz 2
- Quiz 3
- Poster assessment
- · Peer review

## 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

- Explain the difference between asexual and sexual reproduction, and have an understanding of why sexual reproduction has evolved
- Identify the various animal (and plant) mating systems and the strategies used by males and females from each

- Recall specific examples of species from each of the mating systems presented during lectures
- Read and understand scientific papers in the sexual selection literature
- Work in pairs to create a poster that succinctly summarises information on a sexual selection topic

#### Assessment tasks

- · Textbook reading/questions
- Quiz 1
- Quiz 2
- Quiz 3
- Poster assessment
- · Peer review

#### 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

- Recall specific examples of species from each of the mating systems presented during lectures
- Work in pairs to create a poster that succinctly summarises information on a sexual selection topic

#### Assessment tasks

- Textbook reading/questions
- · Poster assessment

#### **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

- Understand and use correct biological terminology
- Explain the difference between asexual and sexual reproduction, and have an understanding of why sexual reproduction has evolved
- Identify the various animal (and plant) mating systems and the strategies used by males and females from each
- Recall specific examples of species from each of the mating systems presented during lectures
- Outline and understand evolutionary processes, especially in relation to sexual selection (rather than natural selection)
- Read and understand scientific papers in the sexual selection literature
- Work in pairs to create a poster that succinctly summarises information on a sexual selection topic

#### Assessment tasks

- Textbook reading/questions
- Science skills quiz
- · Poster assessment

## 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

- Identify the various animal (and plant) mating systems and the strategies used by males and females from each
- Recall specific examples of species from each of the mating systems presented during lectures
- Outline and understand evolutionary processes, especially in relation to sexual selection (rather than natural selection)
- Read and understand scientific papers in the sexual selection literature

#### Assessment tasks

- Textbook reading/questions
- · Poster assessment
- · Peer review

## 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**

- Identify the various animal (and plant) mating systems and the strategies used by males and females from each
- Recall specific examples of species from each of the mating systems presented during lectures
- · Read and understand scientific papers in the sexual selection literature

#### **Assessment tasks**

- · Textbook reading/questions
- Poster assessment
- · Peer review