THE SCHOOL FOR FIELD STUDIES

Marsupials of Australia
SFS 3272

Syllabus
4 credits

The School for Field Studies (SFS)
Center for Rainforest Studies (CRS)
Queensland, Australia

www.fieldstudies.org

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COURSE CONTENT SUBJECT TO CHANGE

Please note that this is a copy of a recent syllabus. A final syllabus will be provided to students on the first day of academic programming.

SFS programs are different from other travel or study abroad programs. Each iteration of a program is unique and often cannot be implemented exactly as planned for a variety of reasons. There are factors which, although monitored closely, are beyond our control. For example:

- Changes in access to or expiration or change in terms of permits to the highly regulated and sensitive environments in which we work;
- Changes in social/political conditions or tenuous weather situations/natural disasters may require changes to sites or plans, often with little notice;
- Some aspects of programs depend on the current faculty team as well as the goodwill and generosity of individuals, communities, and institutions which lend support.

Please be advised that these or other variables may require changes before or during the program. Part of the SFS experience is adapting to changing conditions and overcoming the obstacles that may present. In other words, the elephants are not always where we want them to be, so be flexible!

Course Overview

This 4-week program will focus on the evolution, biogeography, ecology, behaviour and conservation of marsupials of Australia.

Australia is one of the most ancient continents on our planet with geological features dating back to more than 1.7 billon years. Its history was influenced by long periods of isolation from other land masses while uplifts and erosion of mountains, forming and disappearance of inland seas and cycles of fires, drought, cyclones and flooding shaped this land. This long history resulted in a unique diversity of plants and animals. Ancient forms of mammals, such as egg-laying monotremes and some small marsupials lived amongst Australia's dinosaurs about 110 million years ago and formed part of the ancient Gondwana fauna. After the extinction of the dinosaurs and when Australia finally broke away from Gondwana it took with it its unique array of mammals into isolation. Freed from the past dominating dinosaurs and finding themselves on a vast continent with no competing intruders, Australia's ancient marsupials could thrive and diversify. Marsupial 'hippos', 'rhinos' and 'tapirs' occupied the land while killer-kangaroos targeted the weakest of these herds of grazing marsupials.

The following period of cycling climate between icehouse phases with cold and dry conditions and greenhouse phases with warm and wet conditions pushed the existing species to become giants. Some of the species grew up to 3 meters and were hunted by Pleistocene Marsupial lions which were of the size of an African lion. Then, over the last 100,000 years 86% of Australia's megafauna became extinct, but many small-sized species (10 to 100kg survived to the present days.
As Australia continued to be a land of extremes with many habitats fluctuating between fires and floods, these surviving marsupials developed a range of adaptations to changing conditions. These include embryonic diapauses, fire-induced torpor and vasoconstriction.

With arrival of humans on the Australian continent, some 60,000 years ago, and the settlement of Europeans on this continent, conditions started to change again and many factors contribute to a rising extinction of marsupial species in Australia. Australia has a sad record of disappearing mammalian species with one to two extinctions of endemic land mammal species per decade (Woinarski et al. 2015).

Apart from habitat loss, habitat fragmentation and introduced predators are major threats to our current mammalian fauna. Marsupial species suffer particularly from introduced predators. Climate change amplifies many of these extinction causing factors with more extreme weather events, flooding and fires.

In this course you will understand the factors that resulted in the dominance of marsupials on the Australian continent and current factors that jeopardize their survival into the future.
You will become familiar with a wide array of marsupial species that inhabit different habitats of Australia today and which threats they are facing. Mitigating these threats requires knowledge of their ecology and behaviour, the application of sophisticated and preferably non-invasive field research methods and the introduction of effective conservation policies. This course will introduce you to some of these field research methods that Australian scientists are using to study marsupials and other mammalian species and to the current legislative and community-driven conservation tools.

You will gain practical field experiences by assessing factors that facilitate and inhibit the colonization of restored habitat by Australian mammals and particularly marsupials.

The course will mainly take place on the Atherton Tablelands in the Wet Tropics of Eastern Australian, an area with one of the highest proportions of endemic mammals in Australia. While you are living in a campus that is situated in rainforest habitat where you encounter Striped Possums and Bandicoots when doing spotlighting at night, you will also visit wet and dry sclerophyll forests to observe Gliders and will spend some days in Australia's savannahs to see large kangaroos. You will meet wildlife caretakers and learn from their work to rehabilitate tree-kangaroos and pademelons and will hear from indigenous people about their connection to Australia's unique wildlife species.

Learning Objectives

1. Gain in-depth knowledge about the evolution, taxonomy, physiology, ecology and behaviour of marsupial species of Australia
2. Learn how marsupials and other mammals of Australia have adapted to habitats that can fluctuate between extremes
3. Get insight into the threats that jeopardize the survival of many marsupial and mammalian species into the future
4. Develop an understanding on how Australian governmental and non-governmental entities work to mitigate these threats
5. Get familiar with some non-invasive field research techniques to study marsupial
6. Gain confidence in both independent and group work activities and public speaking.

Assessments

Assessment Item	Value (%)
Marsupial species talk	25
Conservation project group assignment	15
Field Research Report	25
Final Exam	25
Participation	10
TOTAL	**100**

Marsupial species talk (25%)

You will be assigned a marsupial species and present information about its distribution, main habitat, its ecology and conservation issues in a three-minute talk (3MT). This is mainly a desktop work but requires you to use a diversity of resources.

Conservation project group assignment (15%)

In this group assignment you will deliver a comprehensive preparation of a conservation project. Based on a given conservation issue you will research options for conservation approaches that can contribute to the resolution of the conservation issue. You have to identify the best option and justify it by taking into account costs, partners, methodological aspects and effectiveness. Your group will present your ideas to the class and needs to be able to explain why this approach should be adopted.

Short Field Research Report (25%)

We will visit some restored habitats on the Atherton Tablelands and will collect data on the colonization of these habitats by mammals. You are required to prepare a short report outlining the

importance of restored habitat for the conservation of one of the selected species, the field research site, the methods used and the results.

Final Exam (25%)

During the final exam you will be tested on material presented in lectures, field lectures and excursions. Answering questions will require critical and analytical thinking across the various teaching units.

Participation (10%)

Everybody should be prepared for each academic session. This implies reading the materials for each session with enough detail to be able to ask relevant questions; and to participate in analytical discussions about the key issues. Active participation during classes, discussions, assignments, and hikes is expected.

Grading Scheme

A	95.00 - 100.00%	B+	86.00 - 89.99%	C+	76.00 - 79.99%	D	60.00 - 69.99%
A-	90.00 - 94.99%	B	83.00 - 85.99%	C	73.00 - 75.99%	F	0.00 - 59.99%
		B-	80.00 - 82.99%	C-	70.00 - 72.99%		

General Reminders

Honor Code/Plagiarism – SFS places high expectations on their students and we hold students accountable for their behaviors. SFS students are held to the honor code below. SFS has a zero-tolerance policy towards student cheating, plagiarism, data falsification, and any other form of dishonest academic and/or research practice or behavior. Using the ideas or material of others without giving due credit is cheating and will not be tolerated. Any SFS student found to have engaged in or facilitated academic and/or research dishonesty will receive no credit (0%) for that activity.

> *"SFS does not tolerate cheating or plagiarism in any form. While participating in an SFS program, students are expected to refrain from cheating, plagiarism and any other behavior which would result in a student receiving credit for work which they did not accomplish on their own. Students are expected to report any instance of cheating or plagiarism by others."*

Deadlines - for written and oral assignments are instated to promote equity among students and to allow faculty ample time to review and return assignments before others are due. As such, deadlines are firm and extensions will only be considered under extenuating circumstances. If you believe that you have been prevented from completing your work on time for reasons beyond your control (e.g. illness), make sure that you discuss this with the relevant faculty member as soon as possible, and certainly before the assignment is due. Late assignments will incur a penalty proportional to the length of time that they are late. This means an assignment that is one day late when students were given two days to work on it will have 50% of total points removed from the grade awarded for that assignment, and an assignment that is 2 hours late when two full days (16 hrs) were allocated to work on it will have 12.5% of total points removed from the grade.

Content Statement – Every student comes to SFS with unique life experiences, which contribute to the way various information is processed. Some of the content in this course may be intellectually or emotionally challenging but has been intentionally selected to achieve certain learning goals and/or showcase the complexity of many modern issues. If you anticipate a challenge engaging with a certain topic or find that you are struggling with certain discussions, we encourage you to talk about it with faculty, friends, family, the HWM, or access available mental health resources.

Participation – Since we offer a program that is likely more intensive than you might be used to at your home institution, missing even one lecture can have a proportionally greater effect on your final grade simply because there is little room to make up for lost time. Participation in all components of the course is mandatory, it is important that you are prompt for all activities, bring the necessary equipment for field exercises and class activities, and simply get involved.

Course components

AS: Assignment**; L:** Lectures, **FL:** Field Lectures, **FEX:** Field Exercise, **FLAB:** Field Lab, **EX**: Exam, **REV:** Review, **GL:** Guest Lecture, **EXC**: Excursion

Code	*Titles of Lectures /Field Exercises*	*Time (hrs.)*	*Type*	*Readings (not all readings will be required)*
MA 1	**Course Overview** This lecture will introduce you to the course components and the resources available to make the course a successful and enjoyable one for you.	1.0	L	Geyle et al. (2018) Tyndale-Biscoe, C.H., (2005) Ward and Williams. (2021) Ritchie (2022)
MA 2	**Geology of Australia and the Wet Tropics** To understand the evolution and distribution of plants and animals we need to get an insight of the geological history of our planet as geological processes shaped landscape and climate.	4.0	FL	Whitehead et al. (2007) Johnson and Prideaux (2004) Johnson, D. (2004) Stephensons, P.J. (1989)
MA 3	**Fauna of Australia and the Wet Tropics** This lecture will introduce to you the main fauna elements of Australia and some of their representatives.	1.0	L	Heise-Pavlov (2017) Russel et al. (2015) Wardhaugh et al. (2018)
MA 4	**Ecosystems of the Wet Tropics** You will be introduced to the main ecosystems of the Wet Tropics and the way of classifying them	1.0	L	Tracey J. (1982) Harrington et al. (2005) Rainforest Ecology and Management. Rainforest CRC, Cairns (2000) Tng, D. (2019)

Code	Titles of Lectures /Field Exercises	Time (hrs.)	Type	Readings (not all readings will be required)
MA 5	**Restoring Rainforests in the Wet Tropics – Restoration Principles** You will receive a brief introduction to various restoration methods and barriers to restoration	1.0	L	Kanowski, et al. (2003) Wet Tropics Management Authority (2021) Tucker, N.I. and Simmons, T. (2009) Heise-Pavlov et al. (2018) Onus, G. (2022) Svenning, J. C. (2020) Hale, R., Blumstein, D. T., Mac Nally, R. and Swearer, S. E. (2020)
MA 6	**The diversity of marsupials** While marsupials have some features in common, they are quite diverse in other ways. Taxonomists have used various features to develop a classification system of marsupials and we will explore where all the different Australian marsupials fit it. A visit to a wildlife sanctuary will give you a firsthand experience on the diversity of this group of animals in Australia.	3.0	L EXC	Menkhorst, P. and Knight, F. (2004) Wildlife of Tropical North Queensland; Cooktown to Mackay, Queensland Museum (2000) Eldridge et al. (2019) Archer. M. et al. (1999) Mitchell et al. (2014)
MA 7	**Welcome to country ceremony – the connection of a local aboriginal tribe to our native fauna** Representatives of the local aboriginal tribe will welcome you to their country and share with you some of their connections to the animals of the local fauna	2.0	GL	Cahir et al. (2021) Cahir F.D. and Ian Clark (2013) Robin et al. (2022)
MA 8	**Evolution and Biogeography of Marsupials** This lecture will dive into the origin of marsupials and factors that influenced the distribution and diversification of Australian marsupials. You will be introduced to some of the ancient types of marsupials that inhabited the Australian landmass.	2.0	L	Black et al. (2012) Rule (2012) Archer et al. (2002) Bi et al. (2018) Bennett et al. (2018) Goin et al. (2016) Feng et al. (2022) Crespo et al. (2022)

Code	*Titles of Lectures /Field Exercises*	*Time (hrs.)*	*Type*	*Readings (not all readings will be required)*
MA 9	**Physiology of marsupials** This lecture will define marsupials in their physiological uniqueness that makes them adaptable to many of the extreme and fluctuating conditions of Australian ecosystems.	2.0	L	Tyndale-Biscoe, C.H. (2005) Gemmell et al. (2001) Marsh et al. (2006) Renfree and Shaw (2021) Deakin and O'Neill (2020) Geiser et al. (2008) Krockenberger et al. (2012) Dubey et al. (2021) Tompkins et al. (2015)
MA 10	**Emerging diseases in Marsupials** You will hear about diseases that are specific to marsupials in Australia, their causes and how to mitigate their effects in marsupial populations.	1.0	MD	Harvey et al. (2023) Dubey et al. (2021) Smith, K.F. et al. (2009) Preece, N.D. et al. (2017)
MA 11	**Marsupial Species Talk** You will be assigned a marsupial species and will present information about its distribution, main habitat, its ecology and conservation issues in a 3MT	3.0	AS	
MA 12	**Field Lab Course (three parts):** You will learn animal observation techniques and how to analyze observational data. You will be introduced to invasive and non-invasive field methods for Australian mammals and become familiar with the technique of spotlighting.	4.0	FLAB	Henderson (2003) Lindenmayer et al. (2001) Fuller et al. (2015) Zemanova, M. A. (2020) Heise-Pavlov et al. (2020)
MA 13	**Marsupials in different environments** Marsupials have adapted to various and often very fluctuating environments of Australia. Some of these amazing ways to live in deserts and to cope with droughts and fire will be presented in this intro-lecture. We will explore more of these fascinating adaptations during this course and our excursion to the drier western margins of the Atherton Tablelands.	4.0	L - EXC	Stawski, et al. (2017) Jarman, P. J. and Evans, M. C. (2010) Matthews et al. (2017) Dawson et al. (2000) Hing et al. (2014) Heise-Pavlov S. and Procter-Gray E. (2020)
MA 14	**Meeting marsupials in different habitats of the Atherton Tablelands** We will observing marsupial species in an upland rainforest and see gliders emerging from their dens in wet sclerophyll forests of the Atherton Tablelands	2.0	FL-GL	Kaiwi et al. (2020)

Code	*Titles of Lectures /Field Exercises*	*Time (hrs.)*	*Type*	*Readings (not all readings will be required)*
MA 15	**The use of different rainforest habitats by Wet Tropics Mammals (FEX)** **Data collection at various sites using different methods** You will collect data on the presence of mammals in different types of rainforests using non-invasive methods.	6.0	FEX	Tracey J. (1982) Harrington et al. (2005)
MA 16	**Short Field Research Report**: You are required to prepare a short report outlining the importance of restored habitat for the conservation of one selected species, the field research sites we visited, the methods used and the results.	2.0	AS	
MA 17	**Brief introduction in scientific writing principles, basic statistical analyses and graph development** You will be given some tools to analyse the collected field data and to prepare a well-written report.	3.5	L	
MA 18	**Threats to marsupials:** **Part 1: Habitat loss and fragmentation** Habitat loss and fragmentation have profound impacts on ecological communities and on populations of marsupials. You will hear about the theory of fragmentation and will be presented with examples how fragmentation of the Atherton Tablelands affects some marsupial species	1.0	L	Wintle, et al. (2019) Heise-Pavlov, S. and Gillanders, A. (2016) Villard, M. A. and Metzger, J. P. (2014)
MA 19	**Threats to marsupials:** **Part 2: Invasive Animal Species** We learn about the impacts of invasive species on Australia's marsupials and potential reasons of these impacts	1.0	L	Harrison, D.A. and Congdon, B.C. (2002) Woinarski, et al. (2015) Heise-Pavlov S. and Bradley, A. (2021) Vernes,et al.. (2001)
MA 20	**Threats to marsupials:** **Part 3: Climate change and its impact on Australian marsupials** Some of the marsupials that live in upland rainforest will soon be the first victims of rising temperatures due to climate change. You will be introduced to some predictions of climate changes in Australia, how these changes affect different habitats and how marsupials are particularly affected.	1.0	L	Williams et al. (2003) Wagner et al. (2020) Meade et al. (2018) Mella et al. (2019)

Code	Titles of Lectures /Field Exercises	Time (hrs.)	Type	Readings (not all readings will be required)
MA 21	**Mitigating threats** During an excursion across the Atherton Tablelands we will see some of the conservation efforts of local communities and NGOs to mitigate threats to our unique species of the Atherton Tablelands	4.0	FL	Weston et al. (2011) Goosem M, Weston N and Bushnell S. (2006) Lindenmayer, D. (2019) Heyword and Norbury (1999) Van Bommel and Johnson (2017) Moomaw et al. (2021) Reside et al. (2014) Keppel et al. (2015)
MA 22	**Conservation of Australia's mammals Part 1: The role of federal, state and local governments and their legislation** You will hear about some of Australia's conservation legislation and policies, their pro and cons and where Australia's conservation strategies are in comparison to other developed countries.	1.0	L	Woinarski et al. (2016) Ziembicki et al. (2015) Lindenmayer et al. (2013) The Australian Government's Threatened Species Strategy (2021–2031) Heise-Pavlov, S. (2019)
MA 23	**Conservation of Australia's mammals Part 2: The role of non-governmental and Action Groups** Non-governmental and Action Groups play an important role in habitat protection, habitat restoration, species recovery and advocacy. A guest lecturer will bring you examples of non-governmental conservation activities in our region and further away.	1.0	GL	Pasquini et al. (2011) Fitzsimons, J. A. (2015) Kearney et al. (2022) Shirk et al. (2012)
MA 24	**Conservation project group assignment**: In this group assignment you will be allocated a conservation issue for which your group will develop and justify cost-efficient and effective conservation actions that consider the interests of involved parties. You will present your resolution strategies to the class.	2.0	AS	Garnett et al. (Eds.). (2018)
MA 25	**Exam Review**	1.0	REV	
	Total	**54.5**		
	UMN Instructional Hours*	**65.5**		

**UMN defines an instructional hour as a 50-minute block. SFS syllabi are written in full 60-minute hours for programming purposes. Therefore 50 full hours = 60 UMN instructional hours (for four credit courses) and 25 full hours = 30 UMN instructional hours (for two credit courses).*

Reading List

Not all readings will be required. Required readings will be shared in advance of class sessions.

1. Archer et al. (2002) The Evolution of Australia: 110 million years of change. Sydney: Australian Museum. (Faculty office)
2. Archer. M. et al. (1999) The evolutionary history and diversity of Australian mammals. Australian Mammalogy 2l: 1-45.
3. Bennett et al. (2018) Deep time diversity of metatherian mammals: implications for evolutionary history and fossil-record quality. Paleobiology, 44(2), 171–198
4. Bi et al. (2018) An Early Cretaceous eutherian and the placental–marsupial dichotomy. Nature Research
5. Black et al. (2012) The rise of Australian marsupials: a synopsis of biostratigraphic, phylogenetic, palaeoecologic and palaeobiogeographic understanding. In Earth and life (pp. 983-1078). Springer, Dordrecht.
6. Cahir et al. (2021). The Importance of the Koala in Aboriginal Society in Nineteenth-Century Queensland (Australia): A Reconsideration of the Archival Record. Anthrozoös. https://www.tandfonline.com/doi/abs/10.1080/08927936.2021.1963544
7. Cahir F.D. and Ian Clark (2013) The Historic Importance of the Dingo in Aboriginal Society in Victoria (Australia): A Reconsideration of the Archival Record, Anthrozoös, 26:2, 185-198
8. Crespo et al. (2022) The last African metatherian. Fossil Record 25 (1), 173–186
9. Dawson et al. (2000) Thermoregulation by kangaroos from mesic and arid habitats: influence of temperature on routes of heat loss in eastern grey kangaroos (Macropus giganteus) and red kangaroos (Macropus rufus). Physiological and Biochemical Zoology, 73(3), 374-381.
10. Deakin and O'Neill (2020) Evolution of Marsupial Genomes. Annu. Rev. Anim. Biosci. 8:25–45
11. Dubey et al. (2021) Recent aspects on epidemiology, clinical disease, and genetic diversity of Toxoplasma gondii infections in Australasian marsupials. Parasites & Vectors 14:301
12. Dubey et al. (2021). Recent aspects on epidemiology, clinical disease, and genetic diversity of Toxoplasma gondii infections in Australasian marsupials. Parasites & Vectors, 14(1), 301.
13. Eldridge et al. (2019) An emerging consensus in the evolution, phylogeny, and systematics of marsupials and their fossil relatives (Metatheria). J Mammal. (pdf)
14. Feng et al. (2022) Incomplete lineage sorting and phenotypic evolution in marsupials. Cell 185, 1–15
15. Fitzsimons, J. A. (2015) Private protected areas in Australia: current status and future directions. Nature Conservation, 10, 1-23
16. Fuller et al. (2015) Connecting soundscape to landscape: Which acoustic index best describes landscape configuration?. Ecological Indicators, 58, 207-215.
17. Garnett et al. (Eds.). (2018) Recovering Australian threatened species: a book of hope. CSIRO PUBLISHING. (Faculty office)
18. Geiser et al. (2008) Torpor in Marsupials: Recent Advances.
19. Gemmell et al.(2001) Birth in marsupials. Comparative Biochemistry and Physiology Part B: Biochemistry and Molecular Biology, 131(4), 621-630.
20. Geyle et al. (2018) Quantifying extinction risk and forecasting the number of impending Australian bird and mammal extinctions. Pacific Conservation Biology 24:157-167.
21. Goin et al., A Brief History of South American Metatherians,.- Springer Earth System Sciences, DOI 10.1007/978-94-017-7420-8_7
22. Goosem M, Weston N and Bushnell S. 2006. Effectiveness of rope bridge arboreal overpasses and faunal underpasses in providing connectivity for rainforest fauna . IN: Proceedings of the 2005 International Conference on Ecology and Transportation, Eds. Irwin CL, Garrett P, McDermott KP. Center for Transportation and the Environment, North Carolina State University, Raleigh, NC: pp. 304-316.
23. Hale, R., Blumstein, D. T., Mac Nally, R. and Swearer, S. E. (2020) Harnessing knowledge of animal behavior to improve habitat restoration outcomes. Ecosphere, 11(4), e03104.
24. Harrington et al. (2005) The Wet Sclerophyll and Adjacent Forests of North Queensland: A Directory to Vegetation and Physical Survey Data. Cooperative Research Centre for Tropical Rainforest Ecology and Management. Rainforest CRC, Cairns (78 pp).

25. Harrington et al. (2005) The Wet Sclerophyll and Adjacent Forests of North Queensland: A Directory to Vegetation and Physical Survey Data. Cooperative Research Centre for Tropical Rainforest Ecology and Management. Rainforest CRC, Cairns (78 pp).
26. Harrison, D.A. and Congdon, B.C. (2002) Wet Tropics Vertebrate Pest Risk Assessment Scheme.- CRC, Cairns, chapters 1.2.1; 2.1 and 2.2, CRS library
27. Harvey et al. (2023). Divergent hepaciviruses, delta-like viruses, and a chu-like virus in Australian marsupial carnivores (dasyurids). Virus Evolution, 9(2), vead061.
28. Heise-Pavlov (2017) Current knowledge of the behavioural ecology of Lumholtz's tree-kangaroo (Dendrolagus lumholtzi). Pacific Conservation Biology, 23, 231–239
29. Heise-Pavlov et al. (2018) The use of a replanted riparian habitat by the Lumholtz's tree-kangaroo (Dendrolagus lumholtzi). - Ecological Management and Restoration 19: 76-80.
30. Heise-Pavlov et al. (2020) Using non-invasive techniques to study tree-kangaroos. In: Tree Kangaroos – Science and Conservation (eds Dabek, L., Valentine, P., Blessington, J., and Schwartz, K. R.) pp. 407-429. Elsevier, Academic Press.
31. Heise-Pavlov S. and Bradley, A. (2021) When ancestry haunts – can evolutionary links to ancestors affect vulnerability of Australian prey to introduced predators. – Australian Mammalogy, 44(1) 98-108
32. Heise-Pavlov S. and Procter-Gray E. (2020) How an Understanding of Lumholtz's Tree Kangaroo Behavioral Ecology Can Assist Conservation. In: Tree Kangaroos – Science and Conservation (eds Dabek, L., Valentine, P., Blessington, J., and Schwartz, K. R.) pp. 85-107. Elsevier, Academic Press.
33. Heise-Pavlov, S. (2019) Improving the management of Australia's biodiversity through better synergy between private and public protected areas–a response to Australia's biodiversity loss. Pacific Conservation Biology, 26(1), 3-12.
34. Heise-Pavlov, S. and Gillanders, A. (2016) Exploring the use of a fragmented landscape by a large arboreal marsupial using incidental sighting records from community members.- Pacific Conservation Biology 22: 386-398
35. Henderson (2003) Practical Methods in Ecology; (CRS Library ECO075)
36. Heyword and Norbury (1999): Secondary poisoning of ferrets and cats after 1080 rabbit poisoning.- Wildlife Research 26, 75.80
37. Hing et al. (2014) A review of factors influencing the stress response in Australian marsupials. Conservation Physiology, 2(1).
38. Jarman, P. J. and Evans, M. C. (2010) Circadian variation in resource quality: leaf water content and its relevance to eastern grey kangaroo Macropus giganteus and common wombat Vombatus ursinus. Austral Ecology, 35(2), 176-188.
39. Johnson and Prideaux (2004) Extinctions of herbivorous mammals in the late Pleistocene of Australia in relation to their feeding ecology: No evidence for environmental change as cause of extinction. Austral Ecology 29, 553–557
40. Johnson, D. (2004) The Geology of Australia.- Cambridge University Press,276pp.
41. Kaiwi et al. 2020. Dusk emergence from den trees by the Wet Tropics Yellow-bellied Glider. North Queensland Naturalist 50: 65-72.
42. Kanowski, et al. (2003) Development of forest structure on cleared rainforest land in eastern Australia under different styles of reforestation. Forest Ecology and Management 183, 265-280.
43. Kearney et al. (2022) Saving species beyond the protected area fence: Threats must be managed across multiple land tenure types to secure Australia's endangered species. Conservation Science and Practice, e617.
44. Keppel et al.;. (2015): The capacity of refugia for conservation planning under climate change. Frontiers in Ecology and the Environment. 13 (2): 106-112.
45. Krockenberger et al. (2012) The limit to the distribution of a rainforest marsupial folivore is consistent with the thermal intolerance hypothesis. Oecologia 168:889-899
46. Lindenmayer et al. (2001) How effective is spotlighting for detecting the greater glider (Petauroides volans)?. Wildlife Research, 28(1), 105-109.
47. Lindenmayer et al. (2013) Counting the books while the library burns: why conservation monitoring programs need a plan for action. Frontiers in Ecology and the Environment, 11, 549-555
48. Lindenmayer, D. (2019): Small patches make critical contributions to biodiversity conservation.- pnas.1813051115
49. Marsh et al. (2006) The Detoxification Limitation Hypothesis: Where Did it Come From and Where is it Going? J Chem Ecol. 32: 1247–1266

50. Matthews et al. (2017) Torpor and basking after a severe wildfire: mammalian survival strategies in a scorched landscape. Journal of Comparative Physiology B, 187(2), 385-393.
51. Meade et al. (2018) Substantial reduction in thermo-suitable microhabitat for a rainforest marsupial under climate change. Biology letters, 14(12), 20180189.
52. Mella et al. (2019) Needing a drink: rainfall and temperature drive the use of free water by a threatened arboreal folivore. PLoS One, 14(5), e0216964.
53. Menkhorst, P. and Knight, F. (2004) Field guide to the mammals of Australia. Oxford University Press (CRS Library)
54. Mitchell et al. (2014) Molecular Phylogeny, Biogeography, and Habitat Preference Evolution of Marsupials. Mol. Biol. Evol. 31(9):2322–2330
55. Moomaw et al. (2021): WORLD SCIENTISTS' WARNINGS INTO ACTION, LOCAL TO GLOBAL
56. Onus, G. (2022) Scaling up revegetation in the Wet Tropics. – TREAT newsletter, Storm season 2022
57. Pasquini et al. (2011) The establishment of large private nature reserves by conservation NGOs: key factors for successful implementation. Oryx, 45(3), 373-380.
58. Preece, N.D. et al. (2017). A guide for ecologists: Detecting the role of disease in faunal declines and managing population recovery. Biological Conservation, 214, pp.136-146.
59. Renfree and Shaw (2021) Placentation in marsupials. Adv Anat Embryol Cell Biol 234:41-60.
60. Reside et al. (2014): Characteristics of climate change refugia for Australian biodiversity.- Austral Ecology 39, 887–897
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