



**TROPICAL REEFS AND RAINFOREST:
THE AUSTRALIA PROJECT**

June 24 – August 6, 2017

**Meeting Place: Cairns, Australia
15 quarter credits/10 semester credits**

FULL PROJECT DESCRIPTION

Thank you for your interest in our Australia program. Here, team members will take part in firsthand investigations of the tropical land and seascapes of far north Queensland. This region is of national and international significance since due to its high proportion of Australia's unique and threatened ecosystems and wildlife. We will study the stunning ecological diversity of the tropical north, from the inland savannah to the coastal rainforests of the 'Wet Tropics', to the famed Great Barrier Reef marine ecosystem. We will examine on-site the fascinating natural history and biogeography of this region, where 45 million years of isolation have supported the existence and evolution of species found nowhere else on earth. Together we will investigate national parks, Indigenous and marine protected areas, and privately owned lands to study the ecology, conservation, and management of ecosystems and threatened wildlife and plant populations, within changing social-cultural contexts and a regressive political climate.

Alongside its distinctive evolutionary history, the region has been the home of Indigenous Australians for tens of thousands of years. The combination of rich scientific and traditional ecological knowledge in this region of Australia makes it the perfect setting to immerse ourselves in field-based learning. From intact wilderness and World Heritage areas to landscapes with a legacy of agriculture and mining, we will research the challenges and successes of conservation in a nation struggling to maintain environmental protection in the face of sustained economic prosperity. We will encounter diverse perspectives from Aboriginal peoples, Park rangers, research scientists, land managers and industry persons, and seek to understand their role in the day-to-day stewardship of valuable natural resources and biological diversity. Through knowledge exchanges with experts and local communities and extended time studying wildlands, we will investigate how our field studies can support and benefit both ecology and society in a contemporary Australian context.

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I. Background Information

We will explore national parks, reef islands, and conservation areas throughout tropical northern Queensland to learn about the natural and cultural history, ecology, conservation, and management of wildlands and wildlife. This program will provide team members with direct firsthand experience in several of Queensland's diverse ecosystems (rainforests, mangroves, savannas, islands, rivers and lakes, and marine ecosystems) and the diversity of bird, mammal, fish, and plant species they harbor. Our group will study ecological research and conservation management from local scientists and conservationists through readings, discussions, and field research projects. In addition, we will conduct our own independent ecological studies, allowing team members to further develop their knowledge and experience of field research methods. Our ecological studies, which may include wildlife, plant and marine surveys, will coincide with cultural interactions where we will evaluate firsthand how various environmental issues, land-use practices and policies have shaped the landscape while we investigate the conservation research and action required to preserve the region's environment.

As the world's oldest surviving culture, with habitation of Australia dating back to at least 50,000 years, emphasis will be placed on understanding aspects of Aboriginal culture, traditions, perspectives and law of the land. In our field studies, we will attempt to see the salient social-ecological issues through their eyes, with introductions to Indigenous ecological knowledge and practices that are intimately tied to the land. We will come to understand the roots of current challenges faced by Indigenous Australians and where opportunities for the co-management of land and seascapes lie.

II. Project Goals and Activities

Through on-site field studies and research projects, participants will have unique learning opportunities to assess major opportunities and challenges affecting biodiversity conservation and sustainable communities in tropical Australia today.

Our Australia program gives students the opportunity for hands-on investigations of the ecology and conservation of Queensland's terrestrial and marine species and communities. We will begin with an initial examination of the natural and cultural history and biogeography of Australia and, specifically the dynamics of the tropical forest landscapes in northeast Queensland. We will then utilize this knowledge as we delve deeper into the wild and spectacular places this area has to offer, discovering both the success stories and the persistent challenges and opportunities that are shaping future conservation in this region.

In order to study the area's ecological diversity, we will base ourselves out of terrestrial national parks, Indigenous lands, and on islands of the Great Barrier Reef marine protected area. We will hone our identification skills of the flora and fauna present in the areas we are studying. In addition, we will have readings which pertain to the area's ecology and conservation research and management. As we improve our knowledge through experiential learning, we will implement various field study techniques, aimed at developing research methodologies that enable scientists to gather data that will aid community and management decision-making. We will work closely with local groups, such as Aboriginal rangers, conservation organizations, and scientists, and through presentations, lectures, and participation in field collection activities, we will gain an understanding from various perspectives of the scientific research and co-management culture in the Wet Tropics of north Queensland. Students will develop an integral understanding of the diverse perspectives available on conservation issues and the intricate balance among social-cultural heritage, economic growth and resource utilization, while examining on-site ecological requirements necessary to sustain resilient ecosystems. We will spend about two-thirds of the project on the mainland and

another third on islands of the Great Barrier Reef, the largest living system on the planet and a breathtakingly beautiful and diverse, yet heavily threatened ecosystem.

During the different phases of the project we will cover the following topics in-depth:

- 1) Natural history of Queensland: What are the factors (climate, geology, soils, etc.) that create the unique ecosystems present in Queensland? What are the common, dominant, and unique species present in these ecosystems? Will we focus on the importance of observation and observation-based writing in natural history.
- 2) Australian peoples: What is the history of human settlement in Australia, from the time Aboriginal peoples settled the area to the arrival of Europeans? What are the different groups' roles in conservation today and how did their roles come to be? What is it about Australian culture that is unique?
- 3) Management of Protected Areas and World Heritage Areas: What are the respective roles of National Parks, Marine Protected Areas and World Heritage Areas in Queensland conservation? How are they managed and is management effective at conserving their values? What are other conservation strategies that are being implemented in the area (such as those by Aboriginal Corporations)? What strategies seem to be working/not working and why?
- 4) Ecosystem and species conservation: What are some of the threatened species and habitats in Queensland? What is being done to conserve them?
- 5) Threats to biodiversity with a focus on invasive and non-native species: What are some of the major threats to conservation and biodiversity in this area? What are some of the strategies used to tackle these threats? We will examine case studies of some of the most notorious non-native species and their effects on biodiversity.
- 6) Marine ecosystem and coral reef habitats: What makes the Great Barrier Reef System unique? What contributes to its biodiversity and productivity? What are the current threats (e.g., climate change, coastal development) and trade-offs between the role of ecotourism and industry? Where does current conservation research and management fit into the picture?
- 7) Social-political context: What are the implications of pro-industry policies implemented by the current State and National Governments on the Great Barrier Reef and other World Heritage Areas? How are these influencing public opinion? What are the ramifications for local, national and international communities?

By the end of the program, each of us will have gained experiential knowledge of Australia's natural and cultural history, and an enriched appreciation of conservation strategies to preserve its threatened ecosystems.

At the various locations described, we will set up camp and use it as a base to conduct our course activities, field studies, and interactions with local organizations. **Please note that prior field research experience is not required. All necessary skills of data acquisition will be taught on-site in Australia.** Our field studies will take place in the North American summer, Australia's winter. We will take advantage of the cooler and drier weather at this time of year, i.e., by the standards of tropical Queensland. However, being the 'Wet Tropics,' rain downpours, while less frequent, can and will happen!

III. Academic Credit

Students will receive 15 quarter credits/10 semester credits from Western Washington University. Our staff will be happy to explain the program in further detail to the applicant's advisor, if necessary. This field studies program gives credit in three courses:

ESCI 497T, Environmental Wildlands Studies (5 quarter credits/3.35 semester credits)
ESCI 497U, Environmental Field Survey (5 quarter credits/3.35 semester credits)
ESCI 497V, Wildlands Environment and Culture (5 quarter credits/3.35 semester credits)

Students will be evaluated on the basis of: 1) active participation in all scheduled class and field activities; 2) examinations and quizzes; 3) field journals; 4) independent research papers/essays; and 5) the design, implementation, and presentation of a mini-group project.

Team members are expected to conduct themselves in a mature and responsible manner. Wildlands Studies reserves the right to require any student to withdraw from the program if their conduct is detrimental to or incompatible with the interests, safety, or welfare of any course participants. We ask all students to read the Student Program Manual before joining the project on-site.

IV. Team Logistics

Participants will fly into Cairns, Australia and meet at the Cairns Airport. If you are traveling in advance of the program, you can arrange to join the group in Cairns when the recommended flight arrives at the airport. At the end of the program, you can decide whether you wish to fly home on the scheduled date or remain in Australia to do some exploring of your own before using the return portion of your ticket.

All reasonable efforts will be made to follow the activities outlined above. However, please understand that on our project in Australia, travel arrangements can remain tentative until the traveling actually takes place. Weather conditions, road closures, as well as bureaucratic and cultural considerations may affect our plans. Wildlands Studies has put together an innovative, unique program in Queensland, and team members need to be flexible, patient, and prepared to adapt to unexpected situations. Being flexible also allows us to take advantage of unexpected yet welcome opportunities that inadvertently arise during our journeys, often producing some of the program's most memorable moments.

V. Accommodations

Participants will be primarily camping with intermittent stays at backpacker hostels and research stations with shared dormitory accommodation.

VI. Official Documents/Visa

You will need a current passport that does not expire until six months after the end of the program. All USA and Canadian students will also need to apply for an Australian Electronic Travel Authority, which is equivalent to a visa (good for 90 days of travel within Australia), before your departure. You can obtain information and apply for the visa online at: <http://www.eta.immi.gov.au/index.html>.

VII. Language

This program is taught in English.

VIII. Pre-Program Mailings

Detailed information regarding travel and visa information, equipment requirements, food costs, meeting plans, group expenses payment, medical and vaccination recommendations, and academic preparations will be sent to all team members in a logistics letter emailed about 8-10 weeks before the project initiates.

IX. Project Leader

TESSA HEMPSON: M.S. in Conservation Biology, University of Cape Town, 2008; Ph.D. Candidate in Coral Reef Ecology, James Cook University. Tessa is a marine conservation ecologist whose research interests have ranged from the impacts of elephants on savanna vegetation and bat community ecology, to ocean upwelling and dynamite fishing on coral reefs. Her passion for coral reefs led her to work on the remote Aldabra Atoll World Heritage Site in Seychelles and Vamizi Island in Mozambique. Tessa's Ph.D. research focuses on the impacts of habitat degradation on coral reef food webs in north Queensland. She has taught our Australia Project since 2017.

X. Project Costs

Program Fee:	\$4150 plus \$150 Application Fee. Program fee due May 1, 2017. Enrollment on a space-available basis after the fee due date until the program is full.
Estimated In-country Expenses:	\$2750 per person Includes most in-country accommodations, travel in-country, camping costs/permits, logistical support, group supplies and materials/research costs.
Food Money:	\$900 (approximately \$20 per day – varies according to taste, dietary preferences and exchange rate)
Personal Spending Money:	\$400 (varies but don't be caught short)
Estimated Airfare:	\$2000
Australian Electronic Travel Authority:	AUS \$20

Students should inquire at the financial aid office of their home campus regarding the use of their loans or grants for this course. Wildlands Studies is not responsible for non-refundable airline or other tickets or payments or any similar penalties that may be incurred as a result of any course cancellation or changes.

XI. Contact Information

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