

Wildlife Conservation in the Anthropocene: An International Perspective

As we usher into the Anthropocene, where 'Amazon' is recognized as a global marketing forum more than the mighty river, the fate of biodiversity reflects a similar trajectory. Human population growth has resulted in unprecedented changes in our planet's ecosystems. Species have been lost, modified, and forced to live in concrete jungles. Human history, culture and socio-political nuances in different parts of the world result in distinctive challenges as well as enigmatically optimistic scenarios with respect to wildlife conservation. In this seminar we will investigate perspectives from South Asia where animals and humans coexist at very high density and proximity, consider the North American system where views about biodiversity can often be very polarizing, and explore conservation in Africa where pockets of pristine wilderness persist. We will engage with the primary literature of wildlife conservation, hear from scientists on the frontlines, and discuss the idea that there could be a unifying model that safeguards biodiversity without detrimentally impeding human development. Three hours of lecture/discussion each week. We will make field visits, depending upon the availability of students and their schedules.

### **COURSE LOGISTICS**

Instructor: Prof. Stotra Chakrabarti; <a href="mailto:schakrab@macalester.edu">schakrab@macalester.edu</a>

**How to address me:** I go by Stotra (*STOW-T-RA*), Prof. Chakrabarti (*CHAAK-RA-BARTI*), or Dr. Chakrabarti. My pronouns are he/him/his.

Want to know about my work and research? https://stotrachakrabarti.wixsite.com/roars-howls-trumpets

Follow me on Twitter for Sci-com: @StotraChakraba2

Lecture: MWF 8:30 am-9:30 am; OLRI 284

Want to Meet? Drop me an email or talk to me before/after class to schedule a meeting. I do not go by strict office hours but I will schedule a meeting based on your availability. I also have an open-door and/or zoom-friendly policy, even if the door is closed! So, please find me around if you need help. I am always around to listen to you. I would be really keen to meet with all of you one-on-one in the first 2 weeks to know more about you and your expectations from the course. Please reach out to schedule a meeting with me in the first couple of weeks.

**Email Policy:** I generally respond to emails promptly between 8-5 PM on weekdays; emails received after 5PM can take longer to respond. I often cannot answer emails over the weekend, so please plan accordingly. Also, there is no restrictions as to when you can email me – you can email me anytime.

Preceptor: Michael Barton, mbarton@macalester.edu

**How to address:** I go by Michael and my pronouns are he/him.

Office Hours: Available by appointment and will have regular office hours Tuesday/Thursday 7:30-8:30 pm over Zoom.

Course Presence: The course primarily relies on experience and exposure (discussions, dialogues, observations, interactions with guest speakers etc.), and it will greatly benefit students to 'participate and learn'. You will earn most of the points if you just show up for class! I will expect students to attend lectures regularly on time, unless there is an emergency (which is absolutely fine). You can take 3 leave of absences without questions for the whole course, but an intimation would be appreciated, otherwise I will be worried about your well-being. Please inform me beforehand if you need more time off. I am committed to be extra-sensitive towards the flexibility that is required in the special times that we live in currently, so please let me know what I can do to make this course more accessible to you. Please see the Covid & Infectious Disease Consideration Section at the end of the document for more details. If you are feeling perpetually low, remember we are going through a severe collective trauma for >2 years. It will have a significant, long-term effect on mental health. If you are getting out of bed and managing to do some things, then you are doing great!

Out of class work expectations: Readings and paper responses should take ~1-2 hours. Longer assignments and group work, including presentations, will require some more time to be scheduled. If you are having trouble working in a group setting due to work or class scheduling conflicts, please let me know. I want you to learn in this course but not rush to achieve that. Take your time. Also, please do not be afraid to make mistakes, we only learn when we make them. Remember "why do we fall? So that we can learn to pick ourselves up!" We are going to make mistakes together and learn together in this course.

**Texts:** No general textbooks for this course, but book chapters and readings will be made available through Moodle.

**Developing your voice in science:** Science requires a balance of courage, humility and kindness – this is as true for undergraduates as it is for researchers at leading institutions. You need courage and confidence to pursue and develop new ideas and approaches, confidence to critique others' ideas, and to follow your curiosity. But science also requires humility and empathy – identifying limitations, asking for advice, permissions, help and guidance, accepting appropriate criticism from others, and reflecting on improvements. ASK QUESTIONS, CRITIQUE PEERS, BUT PLEASE DO SO WITH KINDNESS. As you develop your thoughts and opinions in this class, be mindful that we are also collectively creating a community of learning.

## **LEARNING GOALS**

This course will make you aware of issues pertaining to wildlife conservation in the era that we live in and identify effective solutions for these challenges. The course is designed to facilitate the understanding of concepts relevant to wildlife conservation through interactions with researchers from around the world who are experts in their fields. The course will provide you with the knowledge and skills necessary to navigate issues related to wildlife conservation and management at local, national, and international scales. Through this course, I will help you to be aware of what it takes to be a conservation researcher, and the avenues you can pursue. By the end of the course, you should also be able to:

- Recognize major threats to biological diversity across the globe and their underlying ecological and sociopolitical nuances.
- Understand fundamental concepts pertaining to pragmatic wildlife conservation in an increasingly 'human' world.
- Understand and critique scientific publications, and use key findings to address wildlife conservation issues.
- Understand wildlife conservation trends across the globe and the regulatory framework governing its practice.
- Demonstrate the ability to synthesize and communicate wildlife conservation problems and solutions in scientific as well as popular formats.
- Choose projects from across the world where you could take up internship opportunities and embark upon a journey to make a change!

## ASSESSMENTS [Deadlines can be made flexible --- I want you to learn and not rush!]

**Paper Responses:** Paper responses will be due on the day indicated in the course schedule. The reading material, directions, as well the grading rubric will be made available ahead of time on Moodle so that you have ENOUGH time to prepare. Please check Course schedule/Moodle for updates and timings.

**Paper Discussion:** Paper discussions will be led by a group of 3 students (we will discuss how you want the groups to be). Each group will be assigned to lead a paper discussion once throughout the course. I expect discussion leaders to engage with your peers through active participation. Please check Course schedule/Moodle for updates and timings.

Twitter summary: This will comprise of a gist of the paper in the form of 6-7 tweets. Students are allowed/expected to be creative in the use of images, memes, gifs etc. There will be a total of 2 twitter summaries throughout the course. Please check Course schedule/Moodle for timings. You don't have to create a twitter account for this, but it's a super useful social media platform to have

Midterms: Midterm will comprise of an aptitude based applied question based on the syllabus covered so far. Open book, take-home assignment; students are expected to consult with other peers to work on this assignment. The Question will be uploaded on Oct 7<sup>th</sup> and students will have until the start of Fall Break to submit.

**Inspire talks:** Students (in groups) will make a short 15-minute presentation on a topic of choice. This will be followed by reflections where we will have an active discussion on each presentation. So, make sure to write down questions and comments for your peers when they are presenting and don't be shy to bring them up during the discussion. More details on Moodle.

## **GRADING** (no overlapping due dates for any assignments)

| Assessment            | Due                                   | Points      |
|-----------------------|---------------------------------------|-------------|
| Paper responses       | Asynchronous as given in the schedule | 20 pts each |
| Paper discussion lead | Assigned in class                     | 30 pts      |
| Twitter summary       | As given in the schedule              | 10 pts each |
| Midterms              | October 20                            | 50          |
| Inspire Talk          | Dec 5-7                               | 50          |

| Grade | %       |
|-------|---------|
| A     | 94-100  |
| A-    | 90-93.9 |
| B+    | 87-89.9 |
| В     | 83-86.9 |
| B-    | 80-82.9 |
| C+    | 77-79.9 |
| C     | 73-76.9 |
| C-    | 70-72.9 |
| D+    | 67-69.9 |
| D     | 63-66.9 |

Extra Points/Credits for attending/participating in conferences/outside events related to the course (Wildlife Conservation) = 5 pts each! While only participation will give you points, you should also write an informal letter to me (not graded) elucidating the key take-home messages from the event/conference.

### LEARNING ENVIRONMENT AND INCLUSIVITY

My goal is to promote an inclusive learning environment where diverse perspectives are recognized, respected, and seen as a source of strength. Part of that effort includes a recognition that all humans have implicit biases, and it is our responsibility to do our best to identify them in ourselves and take actions to mediate them. If something in or about this class makes you feel unwelcome, please see me, your advisor, a professor you trust, or a college administrator.

**Names and pronouns**: You should be addressed in the manner that you prefer. If you want to make sure I address you with a particular name and/or pronoun, please let me know.

**Title IX:** Macalester College is committed to providing a safe learning environment for all students that is free of discrimination, sexual harassment, sexual assault, domestic violence, dating violence, and stalking. Further details are

explained in the college's Title IX regulations (https://www.macalester.edu/titleix). If you, or someone you know, experiences a Title IX violation, know that Macalester has staff trained to support you. Macalester faculty members are "responsible employees," which means that if you tell me about a Title IX violation, I must share that information with the Title IX Coordinator. Still, you will control how your case is handled, including whether you wish to pursue a formal complaint. Our goal is to make sure you are aware of the range of options available to you and have access to the resources you need (Title IX Office, 651- 696-6258) including, if you wish, confidential sources on campus who are not subject to the mandatory reporting requirement (see list of "Confidential On-Campus Support" at <a href="https://www.macalester.edu/health-and-wellness/sexual-violence-prevention-education/">https://www.macalester.edu/health-and-wellness/sexual-violence-prevention-education/</a>).

Accessibility: I want all students to have fair and equitable access to the learning opportunities in this course. If there are aspects of the instruction or design of this course that result in barriers to your inclusion or to accurate assessment of achievement, please notify me as soon as possible. Students are also welcome to contact the disability service office to discuss a range of options to removing barriers in the course, including accommodations (contact Disability Services, 651-696-6275 or <a href="mailto:disabilityservices@macalester.edu">disabilityservices@macalester.edu</a>).

Once you have a letter of accommodations, please see me so that we can implement an action plan. Furthermore, I know that at times personal issues, stress, health problems or life circumstances may impact your ability to perform academically. Please contact the Office of Student Affairs at 651-696-6220 (studentaffairs@macalester.edu) for support and ask them to get in touch with your instructors.

# Other helpful information to support your experience in the class:

- To address concerns on content or experience in the class, either find me before/after class; attend TA office hours; or email to set up a time to meet in person.
- If you need additional writing support, please check out *MAX Center* for writing tutors or *Works in Progress* peer review program (Kagin Commons, first floor)
- You are not able to attend class due to an unexpected event (sickness, family or personal issues) Contact me as soon as possible to set up a time to talk about options.
- You are not able to attend class due to religious observance Please let me know you will be observing ahead of time, so that you can obtain course materials ahead of the absence.
- If you need an extension on the submission deadlines Please let me know ahead of the deadline either through email or before/after class.
- Do you need time for yourself? Studentship can be overwhelming, and I want you to take care of yourself. Your wellbeing is of paramount importance and I do not want you to compromise on that, **EVER!** If you are finding it difficult to follow the scheduling or pace of this course, please let me know. Also please check these resources out.

All readings, assignment descriptions, and other information about the course will be on Moodle. Moodle will be updated frequently, so please check regularly.

THIS IS A COURSE TO 'EDUCATE' YOU ABOUT WILDLIFE CONSERVATION AND NOT CRAM THEORIES, SO PLEASE HAVE FUN WHILE YOU WORK THROUGH THE COURSE! ALSO, A SYLLABUS IS NOT A CONTRACT ---- WE WILL REMAIN FLEXIBLE MUTUALLY

# **WEEKLY COURSE SCHEDULE** [Tentative, please check moodle for updates & changes]

| WEEK | DAYS          |   | TOPIC   |   |
|------|---------------|---|---|---|
|      |               | Monday  | Wednesday   | Friday  |
| 1 Au | Aug 29-Sept 2 | N/A   | Personal Intro,<br>Ice breaking, who's who  | Why Conserve Wildlife? Where the wild things are!                                   |
| 2    | Sept 5-9      | LABOR DAY   | Directions in Conservation Biology  Metapopulation Theory & SLOSS Debate  | SLOSS & Connectivity  Tigers & Lions  |
| 3    | Sept 12-16    | Demographic and Environmental<br>Stochasticity: lions and pumas                             | Guest Lecture Small Population Game, the Devils Hole Pupfish: Dr. Jennifer Gumm   | Religion, monetary compensation and conservation in Asia  Paper I updated on Moodle |
| 4    | Sept 19-23    | Traditional Ecological knowledge<br>and Indigenous Perspectives in some<br>parts of Asia    | Guest Lecture Envisioning carnivore conservation at nationwide scales – Asiatic wild dogs in India: Dr. Arjun Srivathsa | *BRAIN BREAK*   |
| 5    | Sept 26-30    | Paper I Discussion (Discussion Lead Group A)  Paper II updated on Moodle                    | Reintroduction Politics  Paper I response Due   | Roads & Wildlife  |
| 6    | Oct 3-7       | Guest Lecture Urban Fishing Cats: Anya Ratnayaka  | Paper II Discussion<br>(Discussion Lead Group B)  | Enchanted Africa  *Mid-Term Question Uploaded*                                      |
| 7    | Oct 10-14     | RECAP Led by Michael Barton Paper II response Due   | Guest Lecture Human-Wildlife Interactions in Tanzania: Dr. Arjun Dheer  | Time for groups to connect regarding Midterm  |
| 8    | Oct 17-21     | The Anthropocene: Civil War & Conservation  | Has Conservation Gone to the Dogs?  | FALL BREAK  |
| 9    | Oct 24-28     | Recap (led by students) Paper III updated on Moodle   | Wildlife Management in North America  | Wildlife Trade  |
| 10   | Oct 31-Nov 4  | Role of Private Landowners in<br>safeguarding species range: Ocelots<br>in Texas – a debate | Paper III Discussion<br>(Discussion Lead Group C)   | Q/A with <u>Gabriela Fleury</u> & Stotra – panel discussion                         |
| 11   | Nov 7-11      | Human-Wildlife Coexistence in the<br>Global North  Twitter Summary for Paper III Due        | Guest Lecture Role of media & outreach in saving wolves of North America: Nancy Gibson Paper IV uploaded                | De-Extinction Debate *sci-<br>communication*  |
| 12   | Nov 14-18     | Overpopulation Discourse in<br>Conservation   | Guest Lecture Shifted Baseline in birds for relocated Native American tribes: Madison Stevens                           | *BRAIN BREAK*   |
| 13   | Nov 21-25     | Paper IV Discussion<br>(Discussion Lead Group D)  | Safe-Fieldwork Strategies & Inclusive<br>Conservation<br>Twitter Summary for Paper IV Due                               | THANKSGIVING BREAK  |
| 14   | Nov 28-Dec 2  | A Sea of Possibilities  | WNS in Bats: Michael Barton   | Future for Conservation biology & Human-Wildlife Cooperation                        |
| 15   | Dec 5-9       | Inspire Talks   | Inspire Talks   | Recap   |

Non-compulsory component of the course (but I hope all/most of you can join):

**Course Dinner: Oct 1st (5:30-7:30 pm)** 

Field Trip to International Wolf Center: 8-9<sup>th</sup> October (overnight stay at Ely) \*subject to change depending upon availability of IWC personnel

## **Recommended Study Materials:**

While there is no textbook for this course and all reading materials (book chapters/articles) will be made available on Moodle, I recommend the following books for further reading, which I would also be referring to throughout the course:

- 1. Conservation Biology for All, eds. NS Sodhi & PR Ehrlich, Oxford University Press 2010
- 2. Conservation Science & Action, ed. WJ Sutherland, Blackwell Science Limited, 1998
- 3. Behavioral Ecology & Conservation Biology, ed T Caro, Oxford University Press 1998

# **Land Acknowledgement**

Our college resides on the ancestral homeland of the Dakota people (particularly the Sisseton and Wahpeton bands) who were forcibly exiled from the land in response to aggressive and persistent settler colonialist oppression. We make this acknowledgement to honor the Dakota people, ancestors and descendants; as well as the land itself.

## **Covid & Infectious Disease Considerations**

For your well-being and for the community: We are living in unprecedented times, and it is our collective responsibility to ease the stress/trauma that we are facing. There are multiple ways and avenues through which you can get help. Please check this Campus Resource for information regarding immediate issues.

Please stay back if you are not feeling well, nothing is more important than your health and wellbeing. Also, if you are not feeling well, please stay back for the sake of the community as a whole.

Help re. absence: I will work with you so that you can get all the resources and help you need to make-up for lost lectures/lab. I generally record all lectures when any student is absent. However, if you cannot attend, it would be really helpful if you could drop me a line before class so that I can get the equipment ready to record the session. Help will always be given in my class to those who ask for it and otherwise.

If you are not feeling well and/or worried that you might be contagious, **please stay back**. No class is more important than your well-being --- it is far more meaningful and prudent to rest, heal and get back when you are physically and mentally ready. As mentioned earlier, Michael and I will work with you so that you can get all the resources you need to make up.

If you are feeling perpetually low, remember we are going through a severe collective trauma for >2 years. It will have a significant, long-term effect on mental health. If you are getting out of bed and managing to do some things, then you are doing great! Your wellbeing is of paramount importance and I do not want you to compromise on that, **EVER!** Also, please check these <u>resources</u> out.

Buddy-up: While Michael and I will always be around to help and work with you, I would strongly suggest that you have a class buddy (/buddies) who you can rely on to share notes and discuss class lectures and labs. This would be of real help IF owing to unforeseen circumstances you have to miss classes/labs – y'all can fill each other in. IT REALLY HELPS! Learning is all about community and collaborations – it never occurs in containment (3)

*Masks:* As per the mandate of the college and to reduce discomfort to yourself and others, please wear a mask (**I would recommend double masking if you are wearing cloth and/or surgical masks**) when we are indoors. <u>Please see this NIH article for more details.</u>

Covid 19 at-home tests: Outdoor labs that include shared vehicle trips and group work can have potential exposure risks. To minimize such risks, I would highly recommend everyone to test 24h before our joint adventures. There are resources available at Mac to provide you with rapid-antigen tests; please work with me to avail those so that we are all safe. I test myself regularly before such field trips.

Please be kind and sensitive about asking others regarding their comfort levels in shaking hands/hugs

