

WILDBTRAX
E X P L  R A T I O N S
WILDLIFE CONSERVATION PROGRAMS
BOTSWANA

African Wildlife & Community Conservation Research Course



JUNE 4 - JULY 29, 2017





INTRODUCTION

Wildtrax Explorations (Wildtrax) creates opportunities for people to journey with purpose by building personal connections with natural and human resources through education and action. **Our Passion** is to inspire people to take action in making a difference within themselves and throughout their environment. We achieve **Our Vision** by promoting opportunities to learn and experience the complex interactions between humans and nature, focusing on coexistence.

Following our vision, we have **teamed up with the only wildlife monitoring organizations in Africa**, Wildlife Africa Conservation Team (Wildlife ACT), to provide students access to sustainable research and monitoring projects. Their mission is to save our planets' endangered and threatened wildlife and wildlands from extinction and Wildtrax wants to create opportunities for students to be part of this mission. Both entities identify science and education as key components to the sustainable utilization and management of wildlife resources; thus, our collaboration achieves a comprehensive research program in the Okavango Delta and Chobe Enclave Region of Botswana.

Wildlife ACT has two main research initiatives in Botswana, implementing biodiversity monitoring in collaboration with Botswana's Department of Wildlife & National Parks and conducting human-wildlife conflict studies and implementing mitigation strategies with the University of Botswana's Okavango Research Institute. Students play an active role in the research through data collection and implementation and will gain valuable skills and knowledge to equip them for their future. Our comprehensive programs ensure that today's students are prepared to deliver a better tomorrow for people and wildlife!

Our Vision is to provide students with a learning platform to develop through our dynamic research projects focused on biodiversity monitoring, adaptive management and the human-wildlife interface.

The **8 week course objectives** are to equip students with an ability to decipher and adapt applicable research techniques to field studies. Overviews of wildlife ecology, behavior, conservation and research theory are included in the first week lecture series, presented by Wildtrax Explorations, Wildlife ACT, and the Okavango Research Institute. The course includes both scientific and social aspects to data collection in an attempt to prepare students for their interactions with communities and different cultures. Students are then placed for **two 3-week periods at different research sites where they will be trained on many different research and monitoring methodologies and fully understand their applications, along with completing a mini-research project on the data they collect.**



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OBJECTIVES

The overall objectives are to equip students with adequate knowledge of various wildlife management and conservation issues in Africa and to attain proficiency in field research methodologies. An emphasis will be placed on understanding the patterns and underlying processes of the human-wildlife interface and biodiversity of the Okavango Delta and Chobe River region. The programs' objectives will be fulfilled through students' participation in Wildlife ACT's two main research focuses and thus provide a constructive feedback system for successful conservation efforts in Africa.

The programs' objectives are to

- Learn valuable wildlife management and conservation principles
- Understand the challenges facing wildlife conservation & community based natural resource management
- Observe the ecological organization and biodiversity of the Okavango Delta and surrounding ecosystems
- Develop advanced field research techniques and associated skills
- Understand the social aspects of conservation science
- Train future conservationists in understanding and applying research in the field through:
 - o Research design & methodologies
 - o Data collection & analysis
 - o Application and implementation of data
 - o Long-term sustainable conservation management projects



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RESEARCH FOCUS

Research initiatives are focused on highlighted conservation priorities within Botswana's ecosystems and conservation areas. In order to address these topics, Wildlife ACT has partnered with the Okavango Research Institute (ORI) of the University of Botswana and Botswana's Department of Wildlife and National Parks (DWNP). Highlighted conservation priorities in Botswana include **Human-Wildlife Conflict** and **Biodiversity monitoring in different Ecoregions**. By collaborating with international universities and their students, we are able to work towards research and management objectives for both the human-wildlife conflict study, as well as the implementation of the long-term biodiversity monitoring throughout Botswana.

Goal

To monitor and record biodiversity dynamics within Ecoregions of Botswana in order to inform adaptive management cycles and develop new policy.

Objectives

- Record and quantify potential drivers of change in the Ecoregions; wildlife, human or climate induced.
- Monitor the broader mammal, bird and invertebrate populations and vegetation to improve our understanding of the system.
- Develop adaptive management strategies while continually monitoring system responses to the applied management actions.

Students on the Study Abroad course will be trained on research methodologies used in fulfilling the above objectives and play an active role in collecting and constructing the data. The monitoring is implemented continuously with some survey work conducted bi-annually.



RESEARCH FOCUS

Human Wildlife Conflict Project

Wildlife ACT will be assisting the ORI with research on human-wildlife conflict, which is a complex management and conservation issue in Botswana. Few studies have been conducted to fully understand the ecological and social patterns and underlying processes of human-wildlife interactions in arable agro-ecosystems in Botswana. Yet, information on spatial patterns, environmental predictors and socio-economic aspects of HWC are required in order to devise effective mitigation and adaptation strategies.

The project Wildlife ACT interacts with, concentrates investigations in HWC 'hotspot' areas of northern Botswana, namely the Okavango Delta in Ngamiland District and Chobe Enclave in Chobe District, where Wildlife ACT focuses on this research. A country-wide assessment of status and trends of HWC will be made by exploring data compiled by the DWNP over the past three decades. Additional data will be collected to validate the data previously collected by DWNP. Data from this project will contribute crucial information to the Government of Botswana about the processes and underlying patterns of HWC in hotspot areas. Such information will be useful in designing effective HWC mitigation strategies and suggesting alternative land use plans to reduce HWC, which is essential for the success of national and regional conservation strategies, such as the Kavango Zambezi (KAZA) Transfrontier Conservation Area, which now includes the Chobe Enclave. Wildlife ACT sits on a Human Wildlife Conflict focus group, looking to develop a larger working group, which much of this information, data and understanding feeds into.

The overall objective is to establish a greater understanding of the patterns and underlying processes of human-wildlife interactions in the dynamic arable agro-ecosystems of northern Botswana and how this understanding can assist with mitigation and policy development.

Wildlife ACT actively assists in the following HWC objectives:

1. Determine the current status and trends in incidents of HWC and map the spatio-temporal distribution of HWC.
2. Monitoring livestock depredation from predators.
3. Explore the effectiveness of current mitigation techniques for predation on livestock, to then develop and test innovative techniques.



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PROPOSED SCHEDULE

WEEK	DAY	DATE	ACTIVITY/TOPIC	LOCATION
Week 1	Sunday	4-Jun	Arrive to Botswana	Maun
	Monday	5-Jun	Welcome and Course Overview	Maun
			Cultural Emersion	
	Tuesday	6-Jun	Introduction to the Okavango Delta	Maun
			Makoro Trip	
	Wednesday	7-Jun	Drive to Khwai Camp	Khwai Camp
			Settle into Camp	
			Overview of Wildlife ACT Monitoring Program	
	Thursday	8-Jun	African Wildlife Conservation - Current Status & Issues (Gap between Management & Research)	Khwai Camp
			Herbivore Ecology, Conservation & Research Techniques	
			Biodiversity Monitoring Methodologies: Strategies, design, methods & application	
			Field Practical	
	Friday	9-Jun	Carnivore Ecology, Conservation & Research Techniques	Khwai Camp
			Behavioural Ecology, Conservation and Research Techniques	
			Biodiversity Monitoring Methodologies: Strategies, design, methods & application	
			Field Practical	
	Saturday	10-Jun	Human-Wildlife Conflict & Community Conservation Introduction	Khwai Camp
			Biodiversity Monitoring Methodologies: Strategies, design, methods & application	
	Sunday	11-Jun	1 group departs to Chobe Enclave Camp	Khwai Camp
Week 2 - 4	Group Splits		Group 1: Human Wildlife Conflict in Chobe	
			Group 2: Wildlife Biodiversity Monitoring in Khwai	
	Friday	30-Jun	Khwai & Chobe Travel to Kasane	Chobe Enclave
Week 5	Sat - Mon	July 1 - 3	Kasane - Victoria Falls	Victoria Falls
	Tues - Thurs	July 4 - 6	Kasane/Chobe: Groups together; mid-term assesment & project overviews	Chobe Enclave
	Friday	7-Jul	Khwai & Chobe Group Split	
Week 6 - 8	Group Split		Group 2: Human Wildlife Conflict in Chobe	Chobe Enclave
			Group 1: Wildlife Monitoring in Khwai	Khwai
Weekend 8	Wed - Sat	July 26 - 28	Regroup - final group course closure, presentations	Maun
		29-July	Departure Day	



FIELD RESEARCH METHODOLOGIES

Students will learn, understand and practice each of these survey methodologies at each of the research camps.

Khwai Tau Camp:

1. Herbivore Survey Methods: Strip transects and point counts
2. Predator Survey Methods: Spoor transects and camera trapping
3. Bird Surveys: Terrestrial point counts and wetland continuous counts, vulture nest monitoring
4. Camera Trapping: Grid survey and predator identification
5. Invertebrate Sampling Methods: Night-light, net sampling and pitfall traps



Chobe Enclave Camp:

1. Herbivore Survey Methods: Strip transects and opportunistic sightings
2. Predator Survey Methods: Spoor transects and camera trapping
3. Bird Survey Methods for Birdlife Botswana: Terrestrial point counts
4. Camera Trapping: Grid survey
5. Wildlife Corridors: Activity and use monitoring
6. Community: Wildlife co-existence monitoring



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SKILLS GAINED

Students will learn and be competent in the following skills before they leave:

- Create a predator identikit (Identify species, sex and age of predators)
- Conduct a predator spoor (animal tracks) transect
- Set up a camera trap, collect photos, review & enter data
- Complete large herbivore transects & enter data
- Identify habitat types within the study areas, by identifying different types of grass, shrub and tree species
- Conduct a bird survey, learning to identify different species of birds
- Conduct an invertebrate survey
- Determine coordinates with GPS
- Identify and determine ungulate herd demographics
- Determine species richness and large herbivore and predator abundance of an area using camera trap and transect data
- Assist with human-wildlife co-existence data collection and when possible, mitigation strategies
- Identify and report poaching incidences
- Identify and report predator attacks on domestic animals
- Work and interact with a research team, learning about logistics, data input and management
- Create a scientific poster from your research



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FIELD SITES & ACCOMMODATION

MAUN

On arrival into Maun, Botswana, student's will stay at a gated campsite in twin dome tents. There are male and female communal bathrooms with basins, showers and toilets. Hot water is provided via solar geysers. Communal laundry facilities are available to students with detergent for washing clothes provided.

A communal kitchen and dining area are situated within the campsite. Meals will be prepared together with other Wildlife ACT students. Food for three basic meals each day will be provided along with drinking water.

OKAVANGO DELTA

Wildlife ACT has established a research camp to implement the biodiversity monitoring with the above mentioned objectives, in the Okavango Delta on the border of Moremi Game Reserve. The area is zoned as an exclusive wildlife management area. The region is home to important populations of endangered predators and threatened wildlife species, with population baseline monitoring data needed.

Okavango Khwai Research Camp

Okavango students will be based at Wildlife ACT's Khwai Research Camp. The camp is situated on a small island in the swamps, accessed by a walkway bridge. Student's stay in canvas walled rooms with thatched roofs with en-suite toilets and showers. It is important for students to realize that the conditions are simple with limited solar electricity supplies. Hot water is provided via solar geysers. Communal laundry facilities are available to students with detergent provided for hand-washing clothes. There is a communal kitchen and dining area, shared with other scientists and researchers carrying out in the area. Meals will be prepared together with other Wildlife ACT students, with students taking turns in preparing meals and cleaning up. Food for three basic meals each day will be provided along with drinking water. We can cater for vegetarians, however NOT for vegans. If you have any other special dietary requirement you will be responsible for purchasing those food items.



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FIELD SITES & ACCOMMODATION

CHOBE ENCLAVE

The region in which Wildlife ACT performs human wildlife coexistence research is the Chobe Enclave. This diverse concession is bordered on the south, west and eastern sides by the Chobe National Park and Chobe Forest Reserve, with the Linyanti and Chobe River creating its northern boundary with Namibia. This area is zoned as an agricultural, pastoral and wildlife management area creating complex human-wildlife co-existence dynamics. This important wildlife region has a number of communities residing in it that are impacted by elephant, lion, leopard, hyena and other wildlife species.

Chobe Enclave Research Camp

Chobe Enclave students are based at Camp Evozo (Baobab), which is located under a magnificent baobab and flattop acacias in the wildlife area of the Chobe Enclave. Student's stay in twin dome tents on cots and have male/female long drop toilets and bucket shower facilities. Meals are prepared by an in-house chef in an open communal tent dining area. The fire is burning every night under the Baobab, listening to the sounds of the African bush!

***Locations of the field sites and amenities might change depending on the location of research**



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COSTS*

DATES

June 4 - July 29, 2017

COSTS

Included: Student participation fees cover orientation, lectures & course materials, accommodation, transportation, 3 meals a day while you are at the Wildlife ACT camps and participation on the projects research and monitoring activities and training.

Excluded: Luxury food items, including soda drinks, alcohol, sweets and chocolate are for your own account. Food at restaurants excluded. All travel costs to Maun or Kasane, Botswana, are for students to cover.

The following additional activities are included:

- Three night/four day excursion to Victoria Falls (Food and beverages will be at the cost of the students estimated to be around \$25.00 per day if eating out.
- Game Drive into Chobe National Park
- Boat trip on the Chobe River into the Chobe National Park
- Traditional dug-out canoe (mokoro) trip in the Okavango Delta

Course participation fees

Given in US Dollars - \$6,900



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