

# JANET MACLEAN

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## RESEARCH INTERESTS

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I am a community ecologist with a specific interest in plant-herbivore interactions. My research currently focuses on understanding the context dependence of large ungulate impacts on the herbaceous community in East African savannas. I also use population models to determine the long-term effects of mega-fauna declines on tree cover, and seek to elucidate the role that trees play in mitigating ungulate impacts on the herbaceous community.

## EDUCATION

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**University of British Columbia. PhD Zoology.** (09/2008-present; switched up from MSc program 09/2009)

- Through my thesis research I have become a competent R user with experience including generalized linear modelling, model selection, multivariate statistics, and randomization tests. I have also gained extensive field experience, accruing a total of 16 months in the Kenyan savanna collecting demographic data on tree populations, and functional trait and community composition data on herbaceous plants.
- All 18 credits of my MSc coursework was graded at the **A** or **A+** level, including courses on advanced statistical techniques, theoretical community ecology, and the human dimensions of conservation.

**University of Aberdeen, U.K. BSc (hons) Zoology.** (08/2003-06/2007)

- **First class** degree. All grades in honours year at **first class** standard, and **first class** marks in seven out of eight subjects taken in third year.
- **First class** dissertation, which included live trapping water voles in the Scottish uplands, genetic analysis using PCR techniques on over 600 samples in the lab, and data analysis involving GLMs and model selection using AIC. Awarded the **top dissertation mark** of my graduating class.
- Selected to participate in an **exchange year** studying in Canada at the **University of Guelph**, Ontario.

## PUBLICATIONS AND PRESENTATIONS

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**Maclean, J.E.,** Goheen, J.R., Doak, D.F., Palmer, T.P., and Young, T.P. (2011) Cryptic herbivores mediate the strength and form of ungulate impacts on a long-lived savanna tree. *Ecology* 92(8) pp1626-1636. *Recommended by Faculty of 1000.*

**Maclean, J.E.,** Goheen, J.R., Doak, D.F., Palmer, T.P., and Young, T.P. (2010; poster) Rodents as buffers to tree encroachment following ungulate extinction. *British Ecological Society Annual Meeting.*

**Maclean, J.E.,** Riginos, C. and Goheen, J.R. (2009; poster) Grass competition limits growth of mature savanna trees. *Ecology and Evolution Retreat* (awarded 2<sup>nd</sup> best poster).

**Maclean, J.E.** (2009; oral presentation) Rodents as barriers to tree encroachment. *Mpala Research Centre.*

**Maclean, J.E.,** and Goheen, J.R. (2009; poster) Rodents as buffers to tree encroachment following ungulate extinction. *UBC Zoology Grad Student Symposium* (awarded 2<sup>nd</sup> best poster).

Goheen, J.R., Palmer, T.P., and **Maclean, J.E.** (2009; poster) David and Goliath: Ant symbionts force demographic trade-offs in host trees and buffer against megaherbivore-driven landscape change in an African savanna. *Ecological Society of America* and *American Society of Mammalogists* annual meetings.

I am a **member** of the British Ecological Society; the Society for Conservation Biology; the American Society of Mammalogists; and Laikipia Wildlife Forum.

## **COMPETITIVE ACADEMIC AWARDS**

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- **Graduate Four Year Fellowship** of \$16,000 per year (2010-2013).
- **BRITE Travel Grant** of \$500 to collaborate with Truman Young at UC Davis (2012).
- **Walter C. Koerner Fellowship** of \$9,500 (2009).
- **University Graduate Fellowship** of \$6,500 (2009).
- **Jamie Smith Memorial Poster Award** for excellence in communication (second place) (2009).
- Second best **poster** at the UBC Zoology Grad Student Symposium (2009).
- **Wendy Fan Memorial Scholarship** of \$5,800 (2008).
- **UBC Entrance Scholarship** of \$8,800 (2008).
- The **John Reid Trust** scholarship of £3,000 toward my graduate studies (2008).
- Winner of the Zoological Society of London **Charles Darwin award** for the **most outstanding British thesis** of 2007, judged by an academic panel considering theses from all top British Universities (2007).
- Winner of the **Nicol prize** for graduating top of my undergraduate class (2007).

## **RESEARCH BURSARIES**

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- **American Society of Mammalogists** Grant-in Aid of Research (2009) of \$1,000USD to investigate the influence of rainfall context on plant-herbivore interactions in an African Savanna.
- **Carnegie Trust** Undergraduate Scholarship (2006) of £780 to investigate ecological correlates of a coat colour phenotype in a water vole metapopulation, to elucidate whether this trait may act as a display of fitness.
- **Nuffield Foundation** Undergraduate Research Bursary (2006) of £1,440 to analyse haemoparasite transmission in the same water vole population. Examination of blood smears from 76 animals showed a conspicuous absence of major blood parasites, suggesting that the segregation of small groups of individuals into isolated patches may be acting as a barrier to transmission.

## **RELEVANT WORK EXPERIENCE**

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### **Teaching Assistant – Field Course in Ecology of African Savannas.** U.B.C. (05/2009)

I gave two hour-long lectures to the class, and helped to run a variety of field activities. I was also involved in the supervision of group-projects completed by the students.

### **Teaching Assistant – Mammalogy.** U.B.C. (09/2009-12/2009)

I ran the lab section of this course with another TA. This involved short presentations to the students each week, organising specimens from the collection, and creating and marking lab quizzes and exams.

### **Fieldwork Assistant – Cambodian Tropical Dry Forest Biological Survey.** Frontier. (01/2008-04/2008)

Assistant on a long-term project to survey Botum Sakor National park, to gain baseline data on the local biodiversity, so benefiting ongoing conservation goals.

### **Entomology Lab Assistant.** Macaulay Institute, Aberdeen. (09/2007-12/2007)

Assistant on a long-term enclosure project assessing the effect of different levels of grazing intensity on community structure throughout the regional trophic network.

### **Fieldwork Coordinator – Small Mammal Trapping.** University of Aberdeen. (06/2007-07/2007)

I co-ordinated and led the 5 person fieldwork team in surveying and trapping water voles in an extensive mountainous region of north-west Scotland as part of a long-term study. I trained the team in the surveying and animal handling procedures, decided on a daily plan of action considering the weather conditions on the hill, bearing in mind the safety of the animals and of the team members, and also managed the data entry.

**Voluntary Outreach and Conservation Experience.** I have volunteered on a number of projects including; 6 weeks as a warden on a Scottish bird reserve, 3 months surveying biodiversity in a Cambodian tropical dry forest reserve, 3 months working on an Ecuadorian cloud forest reserve; participating in ‘Girls in Science’ day at UBC to encourage young girls to enter scientific careers; ‘FestEVOLVE!’ day at UBC running a demonstration table with information about African wildlife; presentation at Mpala Discovery Day to disseminate our research to local Kenyan ranchers.