

BRP Sound Analysis Workshop Participants, Oct. 3-7, 2016

Michael Butler: Environmental consultant, Ontario, Canada. thomas.ormond@gmail.com



I'm a self-employed environmental consultant now living in central Ontario. As an undergrad and grad student at Trent University, some good years ago, I worked on projects addressing the evolution of sexual size dimorphism in birds and the molecular genetics of the esociform fishes. Since then I've worked mostly on conservation-related problems in the boreal forest of Canada. Presently, I'm studying the singing behavior, phenology and likelihood-of-detection of male **Canada Warblers** on the breeding grounds in northern Ontario. One of our group's objectives is to evaluate the suitability of the long-standing North American Breeding Bird Survey protocol as a tool to assess range-wide population trends in this Neotropical migrant. I'm new to methods in the quantitative analysis of bird song and I hope to develop some proficiency with Raven through this

workshop. I'm also looking forward to getting to know more about the research interests and methods of my fellow workshop participants and instructors.

Dr. David Cimprich: Wildlife Biologist, Department of the Army, Fort Hood, Texas, USA.
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I got my MS degree studying competition in winter woodland bird flocks at The Ohio State University. Later, I studied the behavior of songbirds in relation to predation risk during migratory stopover to earn my PhD at the University of Southern Mississippi. I then worked with The Nature Conservancy of Texas at Fort Hood Military Reservation where I supervised the monitoring of the endangered Black-capped Vireo. This position

eventually transferred to the government and so I continue the vireo work but as a civilian employee of the Army. I am interested in many aspects of **Black-capped Vireo vocalizations**. The rich variety of songs and calls used by this species sparked my interest in sound analysis. I attended the Sound Recording Workshop in 2011 but have no experience in the analysis of sound. I want to go beyond what I can sense with ears to learn as much as I can about vireo songs and calls. I want to find out how many different songs a vireo sings and how singing and song types vary across space and time. I hope to learn how to use Raven to do this. I also want to learn to produce publication-quality sonograms.

Frances Geller: PhD Candidate, Queens College, CUNY, New York City, USA.
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After earning an undergraduate degree in music, I landed in the nonprofit arts-in-education sector for a few years and took to birdwatching as a hobby. However, as a New York City native, I had always craved a closer relationship with the natural world, and I eventually allowed birds to take over my life. I am now a student of evolutionary biology at the City University of New York, trying to piece together the puzzle of vocal communication in **house finches** (quite a natural transition from human vocal music). My research interests lie in (1) quantifying minute differences between individual songs in order to understand how larger patterns of cultural evolution emerge, and (2) examining the nature of song repertoire use in breeding contexts. Over the last five years, I have worked at a rudimentary level with sound analysis software, creating spectrograms and performing broad pairwise comparisons. I am hoping to move a step further and break songs into their component variables for examination in isolation. I also look forward to learning about people's sound analysis experiences with a variety of other organisms.

Carissa King: Masters Student, University of North Florida, Jacksonville, USA.
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I received my bachelor's degree in Biology from the University of Northern Colorado. My undergraduate research project was focused on analyzing and comparing the songs of two sage sparrow subspecies and their hybrids from a hybrid zone in Owens Valley, CA. Using Raven, I was able to determine that the two subspecies sang different songs and that the hybrid birds sang a hybrid song. I also spent a summer helping a graduate student record rock wren songs from various locations along the Rocky Mountains. It was the combination of these two projects that sparked my interest in sound analysis. My master's thesis project is focused on identifying sound sources (both biotic and abiotic in origin) and generating a cohesive soundscape for the St. Johns River (SJR) in Jacksonville, FL. A major part of my project will be identifying, measuring, and classifying the vocalizations of **bottlenose dolphins** and soniferous fish. Finally, I will explore how ambient noise levels in the SJR affect the habitat use patterns and vocalizations of the dolphins. At the workshop I would like to learn how to be a more proficient user of Raven and to receive some help with my sound analysis methods.

Seema Lokhandwala: Prospective PhD student. India. seema.lokhandwala@gmail.com



I am a wildlife biologist with a degree in software engineering and have an unusual affinity towards the elephants! I worked for an accounting based firm before my love for elephants enveloped me and I stepped into the elephant world. I am currently working for a conservation planning project for elephants in the Kaziranga- Karbi Anglong landscape, Assam, India. My work involves obtaining data on the population structure of elephants, including individual identification of elephants that move between the regions of Kaziranga National Park and Karbi Anglong. It also involves collaring elephants in this region with GPS-collarS to track their movement in detail and determine seasonal habitat use. I am interested in

looking at acoustic communication in **Asian Elephants** and how we can use elephant vocalization in reducing Human-Elephant conflict in India. In the past, I have worked on a Human-Elephant conflict mitigation project in the Kodagu district of Karnataka, India. I have gained some experience analyzing elephant vocalizations, but most of it is self-taught and I look forward to gain additional knowledge and guidance from this workshop to help me obtain an insight into the unknown world of Asian elephants' communication

Giridhar Malla: Ph.D student, Wildlife Institute of India, Dehradun, India.
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I have been studying fishing cat population and behavioral ecology for last few years. Most of my fieldwork was carried out in Godavari River Estuary in India. Fishing cats are secretive and elusive species and observing them in the wild is rare. To date, I have managed to get some good information on the home range and activity patterns by using camera trap data. But for my dissertation I wanted to understand **fishing cat** vocalizations particularly during territorial markings and breeding periods in the wild. I have no formal experience in analyzing vocal sounds

of animals and interpreting their behavior. I hope that attending the workshop will help me towards my goal of understanding the details of the fishing cat's ecology in. This information will help in implementing proper management plans for the species conservation on ground level.

Mariah Oeser Undergrad Student, University of New Mexico and Biological Science Trainee, U.S. Fish and Wildlife Service, Ecological Services Office, Albuquerque, New Mexico, USA.
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I am currently completing my last requirement towards a B.S. in Biology through the University of New Mexico. I recently moved to Georgia and will continue my education here by beginning a graduate program in Jan 2017 at Valdosta State Univ. My area of study will be **prairie dog communication**; more specifically I will be looking at whether there are differences/patterns in vocalizations in response to four different predator stimuli. I have very little sound analysis

experience and I am self-taught in using RavenPro. I believe this workshop will give me the building blocks I need to accurately extract data, better understand the data, and possibly redefine our scope of work to be sure we are using the most relevant measurements. I also look forward to learning about other projects and ways sound analysis is being utilized.

Roshan Rodrigo: PhD student in Conservation Biology, University of Colombo, Sri Lanka. Also working as an Environmental Specialist, MG consultant (Pvt) Ltd, Sri Lanka.
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Currently, I am conducting research on aspects of the ecology and phenotypic plasticity of the Sri Lankan Corrugated **Water Frog** (*Lankanectes corrugatus*). This species is an endemic and relict monotypic genus in Sri Lanka. The frog has a unique call which can be identified from the distance among other frog calls in Sri Lanka. The ecology and biology of this frog remains sparsely investigated. As a part of my PhD research I am studying their ecology and biology, as well as their unique call patterns in relation to the different altitudinal variations. Also, I am working on amphibian and reptiles taxonomy and so far introduced 3 new species to the science. In addition, I am an environmental specialist to the rural road construction project in Sri Lanka, and as such, am responsible for

instructing engineers and other related officers on how to minimizing the environmental damage. As a part of my job I am monitoring the ambient sound effects come from construction activities to the surrounding environment. The results are help me to introduce mitigating measures to minimizing the sound pollution. In this workshop, I would like to learn about Raven and how to use it to analyze frog calls in different altitudes, focusing on their advertisement calls.

Laurel Screven: Ph.D. student, University at Buffalo, Buffalo, NY, USA laurelsc@buffalo.edu



I am currently studying **mouse** vocalizations as part of my graduate work in the Comparative Bioacoustics Laboratory at UB. The majority of my previous and current research experience has involved behavioral measures of hearing and perceptual abilities of birds and mice using operant conditioning procedures, including spatial unmasking, temporal coherence, vocalization discrimination, and development of tinnitus. As part of my dissertation project, I am analyzing how social exposure and deprivation affects vocal behavior in mice, including changes in rate of production and spectrotemporal parameters of calls. My future research interests include studying the influence of integration of auditory and olfactory signals on vocal behavior in mice. I have experience with

recording animals but not very much background with detailed analysis of recordings. My goals for this workshop are to learn how to gather as much information from recordings as possible and develop different research questions that I could ask using the different methods of analysis learned at the workshop.

Nachiketha Sharma: Phd student, Wildlife Research Centre of Kyoto University, Japan.
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I have been working to understand the elephant ecology in the southern parts of India for more than five years now. I am interested in their behavior and the way they communicate with each other using the acoustic cues. After completing my master's degree in Applied Zoology, in 2011, I joined the ongoing long-term program of monitoring **Asian elephant** population in Southern India, with the aim of understand the different facets of elephant ecology which includes their behavior, life history traits and human-elephant conflicts. Under this project, we are monitoring the individually identified males and females for over 25 years now. After spending several years following the wild elephants in the pristine forests and closely, observing them - on how they

communicate, I became interested in studying and understanding more about vocal communication in Asian elephants, as it is one of the areas of their ecology which is least explored. One of the broad objectives, for my PhD at the Wildlife Research Center, Kyoto University, Japan, is to construct the complete vocal repertoire of Asian elephants. Being a beginner in the field of acoustics, this workshop provides me the best opportunity and platform to learn the details of sound analysis. The understanding and learning that I will get from this workshop will be of a great aid to address the questions, that I am curious to explore.

Sabena Siddiqui: Master's student, University of Hawaii-Hilo, USA. siddiqui@hawaii.edu



Having a lifelong fascination with animal communication, during my bachelors at Indiana University I assisted in examining vocal learning and social dynamics of brown headed cowbirds. I then worked with various **marine mammal** research projects throughout my bachelors. My experiences include interning at Mote Marine Laboratory in Sarasota, Florida; The Dolphin Communication Project in The Bahamas; and The Red Sea Dolphin Project in Egypt. Each experience offered some exposure to acoustics either via hydrophone deployment from vessels or

acoustic analysis in the lab. After graduating, I spent one year in Woods Hole, Massachusetts with the passive acoustics research group at NOAA examining **humpback** whale non-song social sounds. My goal was to completely immerse myself in the world of acoustics to decide if I could commit to this field to the extent that graduate school requires. Luckily I enjoyed the processes involved with acoustics research! So I am currently a master's student at University of Hawaii-Hilo working with Dr. Adam Pack examining humpback whale social sounds through diverse pod compositions with underwater video data to corroborate behaviors with vocalizations. I hope to build a solid foundation in acoustic analysis and all that Raven has to offer so that I can best pursue my thesis work and have the foundation to tackle future endeavors.

Wiea van der Zwan: MSc Senior Ecologist, Ecological Consultant specialized in terrestrial ecology, Kessels Ecology, Hamilton, New Zealand. wiea@kessels-ecology.co.nz



I studied Ecology and Natural Resource Management in the Netherlands after which I travelled ending up in New Zealand where I currently work as a senior ecologist for an ecological consultant company. My primary focus is on terrestrial ecology, performing assessments on flora and fauna, as well as being a GIS analyst. For my work I use bio-acoustic recorders for **bird** and bat surveys, using Raven lite for the bird analyses. I currently work on a project to assess the strike risk of birds

flying into a zipline proposed to be installed within the flypath of the sea birds travelling between their colony high up in the mountains and the ocean where they feed. I hope to learn to use Raven pro in the best way, utilizing all its features and learn how this can help me in performing more accurate analyses. I am also interested in discovering other potential uses for bio-acoustics such as for herpetological research.

Auditing

Joleah Lamb: Postdoctoral Research Fellow, Atkinson Center for a Sustainable Future at Cornell University. joleah.lamb@cornell.edu



I am coral reef ecologist currently conducting research as a postdoctoral fellow at Cornell University in collaboration with the Environmental Defense Fund. I employ a variety of field-based sampling methods, remote sensing tools and microbial sequencing techniques to understand the impacts of coastal development on marine ecosystems – including seafloor dredging for resource extraction, mass tourism, and fishing. My research particularly focuses on developing regions in the Indo-Pacific, including Indonesia, Thailand, Myanmar and the Philippines. In collaboration with the Bioacoustics Research Program at Cornell Lab of Ornithology, I recently deployed sound recorders

(SoundTrap®, Ocean Instruments New Zealand) on coral reefs in the Myeik Archipelago in Myanmar. I am interested in using Raven to link **underwater acoustic soundscapes** with in situ coral reef health surveys and tracking **illegal fishing** practices that use dynamite.