The Conservation Behaviorist

Animal Behavior Society **Conservation Committee**

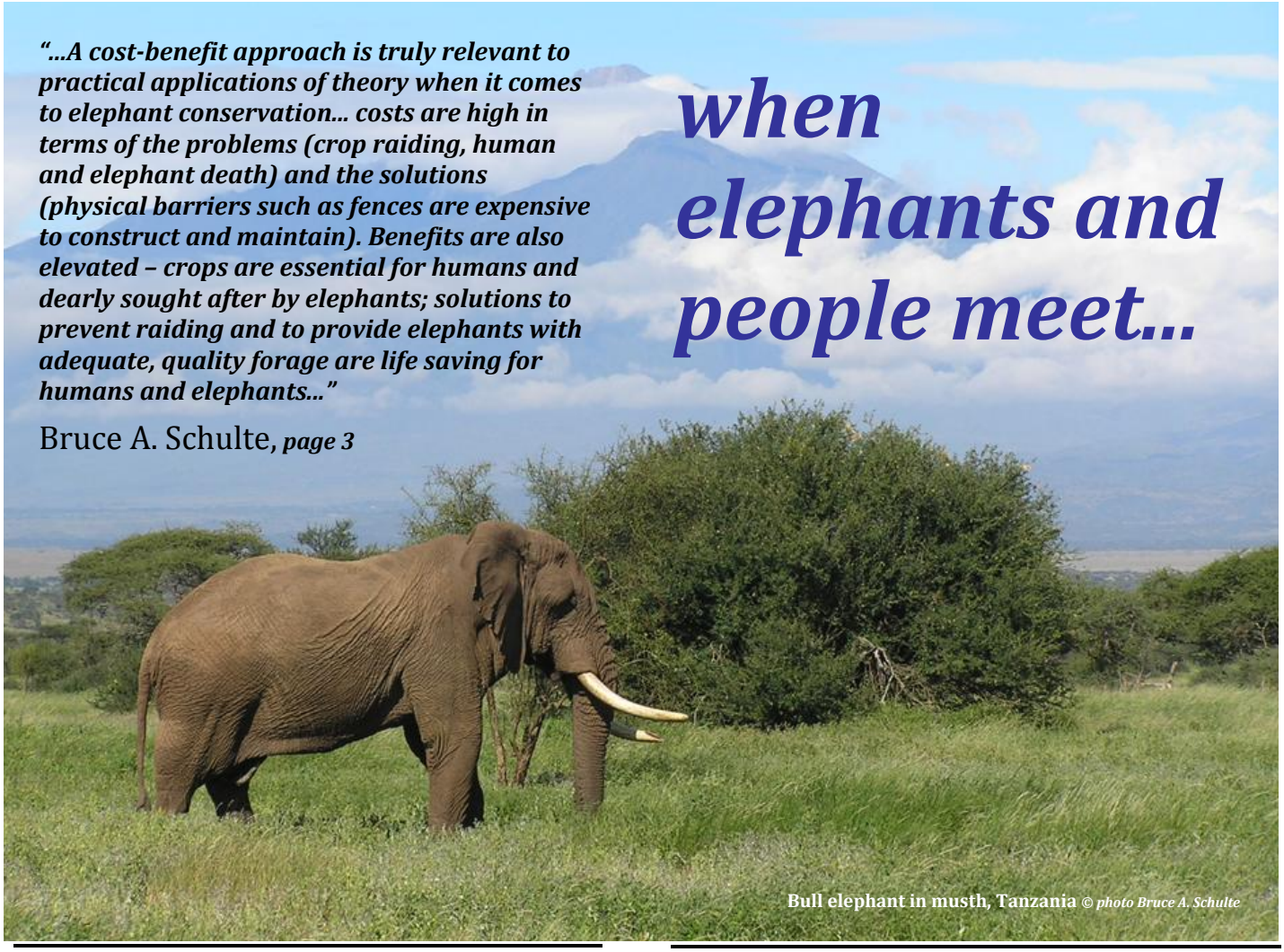
The Conservation Behaviorist, an electronic news-update, informs ABS members about the Conservation Committee's activities, research trends in behavior and conservation, and relevant scientific news in conservation research where behavior plays an important role.
www.animalbehavior.org/ABSConservation

Volume 7 - Number 1 - May 2009

The ABS Conservation Committee

Created in 1997, the Conservation Committee aims to encourage ABS members to participate in research programs addressing the interface between animal behavior and conservation science. By identifying and evaluating the areas in which behavioral research has contributed to conservation, as well as the fields that need development, the Committee seeks to generate discussion and promote studies in behavior and conservation.

In this issue



ABS Conservation Committee Members

Interact with The Conservation Behaviorist

Send letters, announcements, comments and contributions to The Conservation Behaviorist *dshier@sandiegozoo.org* Deadlines for articles are the 15th of the month preceding the next news update. The next deadline is **October 15th**. Contributions submitted by members of the Animal Behavior Society and judged by the Conservation Committee to be appropriate will be published in The Conservation Behaviorist. The publication of such material does not imply ABS or Conservation Committee endorsement of the opinions expressed by contributors.

Editor **Guillermo Paz-y-Miño C.**
Associate Editor **Debra M. Shier**

Is social learning relevant for animal conservation efforts?

Take a look at ***Shier & Owing's*** article in Vol. 5 No. 1 (2007):
www.animalbehavior.org/ABSConservation/ConservatioBehaviorist

Social influences on predator training for conservation

By Debra Shier & Donald Owings

Predator training has become an integral part of captive-breeding reintroduction programs for many species. Although there is little rigorous experimental research, a few studies have shown how the type, intensity and context of pre-release training may affect post release survival. Here we demonstrate that social transmission of anti-predator behavior during training can improve long-term survival following release and that, as long as a social training regime is used, predator avoidance training can mimic experience gained in the wild.

Annual Meeting
Animal Behavior Society
June 22 to 26, 2009
Pirenópolis, Brazil

Distinguished Animal Behaviorist

Richard Dawkins, Oxford University

Plenary Lectures

Daniel Rubenstein, Princeton University
Marlene Zuk, University of California Riverside

ABS Presidential Symposium

Beyond the Selfish Gene: Research Inspired by the Contributions of Richard Dawkins; organizers: **Jerry Wilkinson**, University of Maryland & **Jane Brockmann**, University of Florida.

Symposia

Interacting Phenotypes: Applying Indirect Genetic Effects to Behavioral Ecology; organizers: **Bronwyn H. Bleakley**, University of Exeter & **Stephen Shuster**, Northern Arizona University.

An Integrative Evaluation of the Production, Perception, Transmission, and Evolution of Color Visual Signals; organizers: **Marina Anciães**, Instituto Nacional de Pesquisas da Amazonia & **Kevin McGraw**, Arizona State University.

Pre-Meeting Workshops

Sibling Competition: **Hugh Drummond**, Universidad Nacional Autónoma de México.

Sexual Selection: **Marlene Zuk**, University of California, Riverside.

How to Become More Certain about Uncertainty: An Introduction to Biostatistics: **Donald Blomqvist**, Göteborg University

Behavioural Endocrinology: An Integrative Approach: **Rui Oliveira**, Instituto Superior de Psicologia Aplicada

Coloration and Visual Communication: **Stephanie Doucet**, University of Windsor ■

Julie Rushmore, student at the University of Georgia, receives E.O. Wilson Conservation Award

"...while its value is often overlooked, studying the interface of animal behavior, disease ecology, and conservation biology can provide many important insights. I believe that understanding how associative behaviors affect pathogen transmission will inform management decisions aimed at reducing disease and conserving species," said Rushmore on learning that the ABS chose to fund her proposal *'Behavioral determinants of pathogen transmission in African great apes.'* She will receive the 2009 E. O. Wilson Student Research Grant for Conservation.

Rushmore will use behavioral data to examine how social interactions affect transmission of pathogens in wild primates in Kibale National Park, Uganda. Understanding which individuals contact each other, and in what context, can help predict how fast pathogens will spread within and between groups, and which animals are at highest risk of infection. Rushmore's research will also screen the apes for sexually transmitted diseases (STDs). Because STDs can reduce host fecundity, she will determine whether apes show behavioral counter strategies to defend against STD transmission. Her study is multi-disciplinary and shall provide crucial information for developing management strategies to protect endangered apes in the event of an epidemic.

Julie Rushmore at Bwindi Impenetrable National Park, Uganda (mountain gorilla in background) ***© photo by*** **Jen Croft**

"Julie Rushmore's research on infectious diseases in African apes will apply fundamental insights from animal behavior to aid in conservation. Infectious diseases have become an important threat to wildlife populations, and social and mating behaviors could have major effects on parasite spread within populations," says advisor Sonia Altizer, Associate Professor at the University of Georgia. "Julie's focus on African apes is important because chimpanzees, gorillas and bonobos engage in elaborate social interactions and have also been affected by disease outbreaks such as Ebola, measles, and other respiratory infections. Julie will record detailed behavioral observations in the field and use these data to develop an understanding of who contacts whom, and construct social and mating networks for future modeling studies of pathogen spread. These studies will provide useful management tools for predicting the spread and impacts of future novel pathogens and determining what strategies will be most effective in controlling epidemics. Julie is committed to a career that applies scientific research on animal behavior and infectious diseases to further conservation efforts for at-risk species. She is especially motivated to advance ape health monitoring and behavioral studies for the prevention of disease-induced mortality in wild and sanctuary apes." In my experience, adds Altizer, it is rare to encounter a student like Julie whose interests and skills straddle the disciplines of animal behavior, ecology and conservation, and infectious disease/veterinary biology. Julie's motivation and competence are exceptional and she is at the start of what will no doubt be a long and productive career.

The Conservation Behaviorist talked with Julie Rushmore about the E. O. Wilson Conservation Award:

TCB: What was your immediate reaction to receiving the E.O. Wilson award?

Rushmore: *I was incredibly happy and honored to receive an E. O. Wilson award. It is a wonderful feeling to receive funding for a project that I have worked so hard on and feel so passionate about. Additionally, it is a great honor to receive an award that carries the namesake of such an influential biologist. E. O. Wilson's work is inspirational for students interested in biodiversity, conservation, and sociobiology.*

TCB: What do you think about the award? Will it encourage students to present more proposals with conservation content?

Rushmore: *I think this is a great award! With so many endangered and threatened species and ecosystems, it is wonderful that this award exists. Conservation-oriented projects are not easy to fund. Plus, with our current economic situation, funding this year seems even more difficult than usual. The E. O. Wilson award will certainly benefit my research endeavors by allowing me to study*

endangered Ugandan chimpanzees for my doctoral research. I absolutely think grants like the E. O. Wilson award will encourage more students to pursue conservation-oriented projects. Making conservation funding available to graduate students is an important step in the right direction!

TCB: Why do you work in the interface of animal behavior-conservation biology?

Rushmore: *My research examines how pathogen transmission impacts endangered animal populations. In recent decades, it has become increasingly clear that disease poses a major conservation concern for many threatened and endangered species. While its value is often overlooked, studying the interface of animal behavior, disease ecology, and conservation biology can provide many important insights. I believe that understanding how associative behaviors affect pathogen transmission will inform management decisions aimed at reducing disease and conserving species.*

TCB: How did you become interested in the effects of behavior on pathogen transmission in African apes?

Rushmore: *I have been fascinated by animal behavior for years, and remember telling my friends, in fifth grade, that I wanted to study primate behavior when I grew up. Naturally, I wanted to be like Jane Goodall. Throughout college at Duke University, I worked at the Duke Lemur Center where I studied various aspects of lemur behavior. During this time, I also became very interested in medicine and wildlife health. The summer after obtaining my bachelor degree, I spent three months in Madagascar with a team of Duke researchers where we studied the behavior, health, and conservation of Malagasy wildlife including lemurs and fossa. This unique experience had a profound impact on me and solidified my interest in understanding the role of behavior and infectious diseases in wildlife conservation.*

It was during my first year of graduate school when I read about the paucity of knowledge regarding sexually transmitted diseases in apes. I found this to be very surprising, particularly because some ape species, namely chimpanzees and bonobos, are highly promiscuous. Since this realization, I have begun screening wild African apes for various STDs. Additionally, I will spend a year in Uganda studying how associative, affiliative, and sexual behaviors affect pathogen transmission in wild chimpanzees.

TCB: How do you see yourself in the future? Academic work? Conservation-oriented work?

Rushmore: *I am currently a second year student at the University of Georgia, and I am pursuing a veterinary degree in combination with a doctoral degree in Ecology. I plan to stay involved in conservation-oriented work, but I don't yet know if I'll do this from a clinical or research perspective. Throughout my career, I hope to maintain an integrative approach to wildlife conservation and disease management* ■

The E. O. Wilson Conservation Award

The Edward O. Wilson ABS Student Research Grant for Conservation seeks to encourage graduate students of animal behavior to participate in meaningful conservation-related research. The award is part of the **ABS Student Research Grant Program** and it supports a ***proposal*** considered meritorious for its science and conservation component.

E. O. Wilson, professor at Harvard University, who in 2002 received the ABS Distinguished Animal Behaviorist Award, is one of the world's most eminent scientists and pioneers in biodiversity conservation.

Award Recipients

2009: **Julie Rushmore**

University of Georgia

2008: **Julie Jedlicka**

University of California Santa Cruz

2007: **Jordan Thomson**

Simon Fraser University

2006: **Alysa Remsburg**

University of Wisconsin

2005: **Heidi Fisher**

Boston University

2004: **Jason Munshi-South**

University of Maryland College Park

For additional information on this award visit *www.animalbehavior.org/ABSGrants* or contact the **Conservation Committee** *cstclair@ualberta.ca*

A CONVERSATION WITH BRUCE A. SCHULTE

"As budding biologists, our youthful attraction to nature was probably not to DNA or phylogenies, but the living things all around us. Behavior draws us back to that attraction. Behavior is a universal language. Humans from all countries over all time have watched, learned and relied on nature. Behavior can be a unifying concept in the process of dealing with conservation issues," says Schulte.

Bruce A. Schulte is a Professor of Biology at Georgia Southern University. He is a long time member of the Animal Behavior Society, and he is serving his second term on the Conservation Committee of ABS. In the second half of 2009, he will begin a new position as Head of the Biology Department at Western Kentucky University in Bowling Green. Bruce studies the social and communicative behavior and conservation of large herbivores, especially beavers, elephants, horses and manatees.

The Conservation Behaviorist interviewed Bruce A. Schulte; here is a summary of this dialog:

Q: How did you become involved in Conservation Behavior?

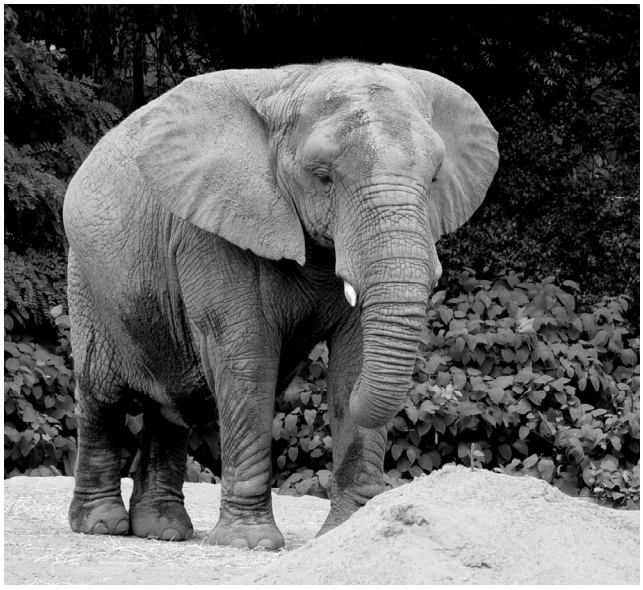
Schulte: *My doctoral research examined chemical signaling and related behaviors in North American beavers. I conducted the study primarily in Allegany State Park, New York. Working within a park provided me an interesting perspective on management issues. Beavers are ecosystem engineers and important constructors of wetland habitat; however, through their cutting of trees and damming of waterways, they also can do extensive and costly damage to human structures. For several hundred years, beavers were a major source of commerce and reason for westward exploration in North America. People harvested beavers to such an extent that by the 20th century they were virtually extirpated from east of the Mississippi River. Interestingly, a change in human behavior saved beavers from potential extinction –the beaver hat style was replaced by the silk hat, and the market for beaver plummeted. Today, beaver numbers are increasing, but there is less room for them and thus conflict with humans occurs regularly. Beaver trapping is less popular and profitable today, so preventive measures are sought, such as reducing the likelihood of beaver settlement in an area, erecting structures to avert damage, and increasing tolerance of humans towards beavers. Thus, my research on beavers was my gateway into human wildlife conflict, and revealed how understanding human and animal behavior can facilitate coexistence.*

Bruce A. Schulte in Tanzania © ***photo by Erek S. Napora***

Q: How did you become involved in the Conservation Committee of the Animal Behavior Society?

Schulte: *Because I study mammals that regularly come into conflict with humans (beavers, elephants and manatees), I have been sensitive to human-wildlife issues. As I recall, Rich Buchholz co-organized a conservation-behavior symposium at the 1995 ABS meeting, and later became Chair* [2000-3] *of the newly organized ABS Conservation Committee* [after Jim Ha 1997-

2000]. *I served on the committee during this initial time. Our early gatherings at ABS meetings were filled with graduate and undergraduate students who wanted to conduct conservation within the realm of behavior, but had no clear idea of how to achieve such a melding. The Conservation Committee organized a webpage and made strides forward on being recognized. I rotated off the committee when my term ended and recently have returned. I was fortunate to be a part of the well-received conservation symposium at the ABS Vermont meeting two years ago. Increasingly, my graduate students have incorporated conservation issues into their behavioral research on elephants and manatees.*



African Elephant, Roger Williams Zoo © ***photo by G. Paz-y-Miño C.***

Q: Why should behavior be considered as a component of management decision-making?

Schulte: *In any decision making process, all the potential variables should be considered. Numerous factors, such as the issues, stakeholders and budget, will influence what variables are deemed worthy of attention issue. The behavior of wildlife and humans needs to be understood to assess the likely success on short- and long-term scales of management decisions. In today's world, broad, population wide actions are often not practical or desirable. For example, when beavers or elephants were overpopulated locally, regular harvesting often was implemented. Today, harvesting is often not feasible because of expenses or the multiple uses of wildlife (e.g., aesthetic value, tourism). Furthermore, regional animal populations may be so low that harvesting could affect the sustainability of the species. Hence, a more practical and sustainable solution may be to retain the current individuals occupying the habitat in a way that permits coexistence with humans. This often requires an understanding of behavior.*

My graduate students and I, along with collaborators at the University of Florida, notably Iske Larkin, have been studying the behavior and reproductive biology of Florida manatees in Crystal River. Manatees are an interesting subject for human wildlife conflict because the conflict is entirely human-to-manatees. Boat strikes are a major source of mortality for manatees, but these large, aquatic herbivores really do nothing to cause problems for humans. Similar to the current problems with right whales, if we eliminated all ships and boats, these species might be fine, but this is not a realistic solution. We need to understand when and why manatees go where they go, and what sensory modalities can be stimulated to reduce negative interactions with humans and their machinations. There are numerous groups - governmental, non-governmental, private, academic– working to save manatees, and we try to contribute behavioral information that will facilitate this objective.

Q: What are the tradeoffs of incorporating a behavioral perspective into conservation?

Schulte: *The positive aspects are that the animals may be maintained in the habitat, providing a more complete and functional ecosystem. Humans gain these ecosystem benefits with potential educational offshoots by living with, rather than dominating wildlife. An understanding of another life form often provides greater appreciation, increasing aesthetic,*

ethical and practical value. However, because behavior has not been a major component of conservation, its incorporation requires buy-in by the stakeholders. Additionally, scientific data may not be available on aspects of behavior relevant to the conservation issue. Time and money may be required for a conservation behaviorist to be able to provide meaningful input. This can delay action, and limited time can be an enemy of conservation.

Q: What is needed to make behavioral conservation a valued component of broad wildlife conservation?

Schulte: *Quite simply, success; as issues that incorporate a conservation behavior approach show positive results, the incorporation of behavior into the process will be lauded, creating a positive feedback loop. Humans are deeply rooted in nature, we often forget that in our 'technological world.' As kids, many of us (even those who did not go on to become biologists) played in the woods, splashed through streams, searched the grass for anything that moved and read stories about the lives of animals (Disney still makes a living on it). As budding biologists, our youthful attraction to nature was probably not to DNA or phylogenies, but the living things all around us. Behavior draws us back to that attraction. Behavior is a universal language. Humans from all countries over all time have watched, learned and relied on nature. Behavior can be a unifying concept in the process of dealing with conservation issues.*

Q: What are the theoretical and practical outcomes of working in conservation behavior with elephants?

Schulte: *My research area focuses on social behavior and communication, especially chemical signaling, at proximate and ultimate levels. For my studies with elephants, I work regularly with organic chemist Tom Goodwin (Hendrix College), and behavioral endocrinologist Elizabeth Freeman (George Mason University & the Conservation Research Center at the Smithsonian Institution).*

Elephants have many excellent attributes as study models, especially for chemical signaling. Their sense of smell is keen, using both olfaction and vomerolfaction, and they have an easily identifiable repertoire of chemosensory behaviors...

Chemical signals are released in the urine and temporal gland secretion, and likely in feces and in their breath. They exhibit a polygynous mating system with strong male-male competition and apparent female choice; they also have a robust matriarchal social structure. They are interesting for the study of behavioral hypotheses in that they share characteristics with a variety of organisms but also are unique in some ways. From a practical standpoint, elephants are prevalent in zoological institutions and other facilities across North America, allowing us to conduct studies in controlled settings before taking them to the field. A cost-benefit approach is truly relevant to practical applications of theory when it comes to elephant conservation. For the most part, costs are high in terms of the problems (e.g., crop raiding, human and elephant death) and the solutions (e.g., physical barriers such as fences are expensive to construct and maintain). Benefits also are elevated –crops are essential for humans and dearly sought after by elephants; solutions to prevent raiding and to provide elephants with adequate, quality forage are life saving for humans and elephants.

Q: What are the working conditions in the field that facilitate and/or frustrate conservation behavior efforts with elephants?

Schulte: *Human elephant conflict is a major issue in range states for both Asian and African elephants. People who share habitat with elephants know of their potential destructive power, and relish any advantage to diminish such impact. While this encourages our research, it also creates difficulties. For instance, the*

establishment of a controlled study to reduce crop raiding means that some fields may have no deterrents. However, these are not just experimental plots, but the livelihood of individuals. Thus, we have to design studies to moderate hardship on humans while still providing reliable scientific data. Furthermore, solutions must be sustainable within the economies of the countries containing elephants. People must see the benefit of investing in a solution or else the materials or human time involved will be used elsewhere. The local people are wonderful, kind human beings who will share whatever they have with a friend –and they make friends easily. In terms of possessions, most have very little, but they are replete with family and friendships that bring joy to their lives. This is great motivation for assisting them in their attempts to coexist safely with elephants.

Q: How does a conservation behaviorist differ from a traditional conservationist interested in protecting elephants?

Schulte: *The two certainly see eye-to-eye on important things like the need to save species and the resources necessary to sustain them. In some respects, it's a matter of scale. Conservationists can bring a landscape level view to the table, perhaps assuming that if the large scale 'box' is managed then the pieces within the box will survive. Even when management is at a species scale, conservationists may deal at the population level, measuring outcomes like structure and sex ratios without investigating the process that led to the outcome. This is where a behavioral approach can be fruitful.*

By understanding what individuals and categories of individuals are likely to do in a population, one may be able to predict population stability or change as well as solve particular problems. For example, young male African elephants were killing white rhinos in Pilanesberg National Park in South Africa.[1] There were no older male elephants in the population, so the young males were entering and sustaining musth (a rut-like condition marked by high testosterone, aggression and typically sexual activity) earlier in development than normal. By introducing older males into the population, musth in younger males was suppressed and the aggressive behavior towards rhinos ceased...

This finding is not only applicable to small reserves, but also serves notice on how aberrant behavior could come about in free-ranging populations where older males have been removed, such as by poaching for ivory. In our own line of research on chemical signals, my collaborators, Scott Riddle and the late Bets Rasmussen, developed a mechanical device coupled with chemical signals to thwart Asian elephants from entering crop fields[2]. We are pursuing similar lines of application for our research on chemical signals with African elephants. As biologists, we are keenly aware of the important role variation plays in biological processes (and in our statistical analyses!). Individuals are the centerpiece of variation. Recently, I was reminded of a very apropos quote from Dan Janzen[3] 'herbivores do not eat Latin binomials.' Herbivores eat parts of plants and leave other parts alone. Even carnivores that eat entire organisms do not consume individuals indiscriminately. In my estimation, one of the key features a behavioral conservationist brings to the table is the awareness of variation based on individuals, and the potential importance of this variation to conservation solutions ■

1. Slotow, R, Van Dyk, G., Poole, J., Page, B. & Klocke, A. 2000. Older bull elephants control young males. Nature, 408, 425–426.

2. Rasmussen, L.E.L. & Riddle, S.W., 2004. Development and initial testing of pheromone-enhanced mechanical devices for deterring crop raiding elephants: a positive conservation step. Journal of the Elephant Managers Association, 15, 30-37.

3. Janzen, D.H. New horizons in the biology of plant defenses. In: Herbivores: Their Interaction with Secondary Plant Metabolites (G.A. Rosenthal and D.H. Janzen, eds.), pp. 331-350. Academic Press, NY.

TRANSFORMATIONS

A young researcher's transition from animal behavior to conservation behavior

By Rebekah R. Karimi*

Rebekah R. Karimi with baboons in Kenya © ***photo by Stephen Karimi***

There I was, sitting in a cornfield in the Tanzanian night, ineffectively guarding the harvest from wildlife, listening to farmers scream at the elephants they could hear crossing the river. The small herd was heading toward their crop fields, which provide a livelihood for the farmers. From the sale of their crops, they have the opportunity to send their kids to a better school, their shot at finishing construction on a house or their chance at giving their kids gifts for Christmas this year. As I sat and listened to the desperation in the voices of the people, I finally understood the scope of the problem at hand. All of my preparation for fieldwork during my first year in graduate school came screaming back at me, as the stark reality hit: people yelling at elephants in hopes that these five-ton animals would change their course or at least skirt the edge of their vulnerable investment. All my experience had led up to this -my chance to make a difference and help these people understand what measures they could take that would be effective at deterring elephants.

I graduated from Michigan State University in 2003 and had the opportunity of a lifetime to join Dr. Anne Engh as a field assistant for her post-doctoral research in Botswana's Okavango Delta. We followed a troop of chacma baboons for a year within the boundaries of the Moremi Game Reserve recording behavioral data. The memory of the close encounters we had with wildlife of all kinds still sends a thrill through my body and brings a smile to my face. It was an extraordinary experience to live in a place where I was rushed by lions on more than one occasion or woken up in the middle of the night by elephants feeding on the jackalberry tree shading my tent. I certainly became aware that we were humans, guests in the territories of the animals we encountered.

I spent the following year in Kenya's Laikipia District at an active ranch, which drew its income by hosting researchers, tourists, and Boran cattle. I joined Dr. Ryne Palombit's research team and we followed olive baboons as they walked through the grazing land of the Turkana, Samburu, Turgen, and Pokot tribes on their daily hike from their sleep trees near a man-made dam to the river. On the daily journey, we encountered numerous herds of sheep, goats, and cattle. There was a huge difference in the behavior of the baboons as they were impacted by the human presence, constantly being interrupted from feeding by yet another herder whistling at his animals as he passed by. I met people from the Pokot tribe that had never tasted or seen a banana because as much as they walked, they had never been out of the semi-arid savannah. I carried a freshly delivered goat to a herder so that "our" baboons would not take the opportunity for a snack. The contrast between the two field sites could not have been starker and the change in environments affected me as much as it did the baboons.

These two field experiences set the stage perfectly for my transition into conservation behavior with a focus on human-wildlife conflict. Although studying animal behavior is my passion, I saw how human interference can affect behavior and the overwhelming need to conserve natural places for the animals while simultaneously improving the quality of life for the people. I had returned from Kenya with a new career goal and a husband who had the same ambition and many more first hand experiences with the conservation struggles in Africa.

My objective in returning to graduate school was to equip myself for a career on the front lines of the conservation battle in Africa. The research I conducted for eight months in Tanzania focused on evaluating the accuracy of farmers' perceived crop damage and strategies used to deter wildlife and elephants. I also continued the research of previous graduate students at Georgia Southern University who were testing compounds that have potential to act as a naturally-occurring elephant deterrents around crop fields. This study afforded me a different perspective of human-wildlife conflict, as I concentrated on internalizing the problem as a person involved. This is what brought me to

that crop field on a chilly Tanzanian night, keeping my local assistant company as she anxiously walked around her cornfield in the hopes that the elephants and bushpigs would bypass her field this season.

Rebekah R. Karimi (r) with a farmer friend © ***photo by Rose Davis***

As I spent more time with the people, I realized that my animal behavior background was the perfect preparation for the research at hand. I was effectively trying to apply behavioral theory not only to the elephants, but to the farmers as well. By using deterrent methods such as chili peppers or fences, farmers were increasing the cost, or risk, on the elephants' entrance into the fields. However, optimal foraging theory also applies to the cost humans invest in the protection against crop-raiding elephants. Farmers dealing with conflict are measuring the costs of implementing barriers to ensure that their crop would fulfill its potential yield. If that cost and initial investment is too much, farmers will be apt to take their chances with no barrier methods against crop raiding. The initial investment in barrier methods must be less than the value of their crop at harvest. If an electrical fence will cost a community more than three years worth of harvest to assemble, the farmers have a delayed return on their investment, which they may not be able to afford.

Throughout my young research career, I have seen the integration of conservation biology and behavioral ecology in the literature, but experiencing human wildlife conflict in the field not only illustrated the scope of the problem, but also encouraged me to succeed on the conservation front. I learned how much is riding on the success of conservation strategies, which can be influenced positively by the integration of behavioral theory ■

***Rebekah Karimi** is student in the Master of Biology program at Georgia Southern University, advisor Bruce A. Schulte. Bekah received a B.S. in Zoology at Michigan State University, where she served as a field and research assistant to Eva Maria Muecke, who studies male dispersal patterns of the Belding's ground squirrel in the Sierra Nevada Mountains. Bekah also worked with Kay Holekamp and Russ van Horn on the Mara Hyena Project. Following graduation, she was employed as a field assistant on baboon studies in Botswana and Kenya. Bekah has interests in the social behavior of mammals and in conservation strategies that benefit local people and African wildlife. She participated in a study on human-elephant conflict that involved documenting how actual crop damage caused by wildlife compared to the perception by farmers of damage to their crops. This study developed into her thesis topic as part of a long-term investigation of elephant social behavior, communication and ecological impacts.*

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Animal Behavior Society ABS Conservation Committee

The Conservation Behaviorist, an electronic biannual news-update, informs ABS members about the Conservation Committee's activities, research trends in behavior and conservation, and relevant scientific news in conservation research where behavior plays an important role.

Jason South, student at the University of Maryland, College Park, receives the "E. O. Wilson Conservation Award"

"...Behavioral ecology has been my main intellectual interest since my early undergraduate days. However, I am morally compelled to work in an area [Bornean rainforest] with some relevance to nature conservation. I was persistent -and lucky- enough to develop a project that represents a 'best of both worlds' scenario..." said South when learning his proposal "Behavioral responses of treeshrews to selective logging on Borneo" will be funded by the ABS Student Research Grant Program and he will receive the E. O. Wilson Student Research Grant for Conservation.

South's study will examine territoriality, mating system evolution, dispersal patterns, and genetic diversity of the Large Treeshrew, *Tupaia tana*, in relation to logging of lowland rainforest habitat in Borneo. The study will integrate basic animal behavior research with practical implications for conservation.

The acceleration of timber production in Southeast Asia, particularly in Borneo, makes research in production forests an urgent necessity. In South's opinion, ceasing timber harvesting is not politically or economically viable, so research efforts should focus on the behavior, demography, and evolutionary processes of wildlife in logged forests with the ultimate goal of estimating and managing long-term persistence in these habitats.

(see Award page 6).

The Conservation Behaviorist Vol. 2, No. 1, May 2004

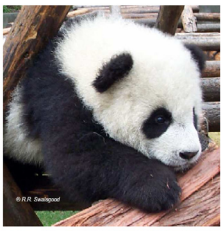
In this issue

Conservation Tips By Daniel T. Blumstein

Is there anything a behaviorist can do to help conservation?

Develop and test predictive models of animal behavior that apply to endangered and non-endangered species. Predictive models will be useful when managers are faced with managing an endangered species for which little information is known. While not a substitute for detailed study of the endangered species, predictive models may help highlight behaviors that influence demographic parameters, such as infanticide or reproductive suppression.

Captive breeding, conservation and behavioral research



"How can we justify confining animals in small enclosures, often far removed from many salient features of the animal's natural environment? ...How can we justify the expenditure of money to maintain a few representatives of endangered species in captivity when the same funds could significantly enhance in situ conservation efforts? ...These questions are interrelated because minimal well-being is a prerequisite for reproduction for conservation breeding..." says Ronald R. Swaisgood in our Feature Article: *"What Can Captive Breeding Do for Conservation and What Can Behavior Research Do for Captive Breeding?"* (page 3)

The Conservation Behaviorist Vol. 2, No. 2, November 2004

In this issue

Conservation Tips By Daniel T. Blumstein

Is there anything a behaviorist can do to help conservation?

Apply "Tinbergen's *Four Questions*" to a conservation question: the physiological and sensory mechanisms that control behavior, the development or ontogeny of behavior, its function and evolution. Applying our major conceptual framework can provide novel management questions and can help structure the scientific study of an endangered species. Share this conceptual framework with others! It works well for behaviorists and it can surely work well for mainstream conservation biologists.

Heidi Fisher, student at Boston University, receives E. O. Wilson Conservation Award

"...As a field biologist, it is difficult not to become a conservationist, particularly when you study animal behavior. An animal's first response to a stressor is often a change at the behavioral level. Behavior is a reliable indicator of ecological disturbance..." says Fisher. Her proposal "Communication breakdown and hybridization in *Xiphophorus* fishes" will be funded by the ABS Student Research Grant Program and she will receive the 2005 E. O. Wilson Conservation Award.

(see Award page 8)

The Conservation Behaviorist Vol. 3, No. 1, May 2005

In this issue

Conservation Tips By Daniel T. Blumstein

Is there anything a behaviorist can do to help conservation?

Work in an endangered habitat. Even if you are not focusing on an endangered species, by working in an endangered habitat you will illustrate, by example, the value of the habitat and you may be able to collect additional information that will be useful for endangered species management.

The Conservation Behaviorist

Animal Behavior Society ABS Conservation Committee

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Vol. 4 No. 1 - May 2006

Building a Case for Conservation Behavior

In this special issue of The Conservation Behaviorist (TCB) we include articles published since 2003 and new essays. The area of conservation behavior has grown significantly during the past decade and the Animal Behavior Society Conservation Committee has played an important role in this process. Besides TCB, the Committee has created the E. O. Wilson Conservation Award, three data bases available online (funding opportunities for behavioral research, publications in conservation behavior, mentors in conservation behavior), and has also sponsored scientific events at the Society's annual meetings. We are confident that our efforts benefit ABS, the conservation community, and the public at large.

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Interact with the Conservation Committee

Send letters, announcements, comments and contributions to The Conservation Behaviorist *gsuzymmz@worcester.edu*
Deadlines for articles are the 15th of the month preceding the next news update. The next deadline is **October 15th**. Contributions submitted by members of the Animal Behavior Society and judged by the Conservation Committee to be appropriate will be published in The Conservation Behaviorist. The publication of such material does not imply ABS or Conservation Committee endorsement of the opinions expressed by contributors.

Editor Guillermo Paz-y-Miño C.
Associate Editor Allison C. Alberts

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Vol. 4 No. 2 - November 2006

Colleen Cassady St. Clair, New Chair of the Conservation Committee

Greetings Conservation Behaviorists! It's an exciting time to be working on conservation behaviour and it's a pleasure to take on the reigns of the Animal Behavior Society's Conservation Committee. In the coming years, I hope I can share with you inspiring development of behavioural approaches to conservation problems.

As incoming Chair of the Committee, I'd like to begin my term with some appreciation. I am sure I speak for everyone in thanking Guillermo Paz-y-Miño C., outgoing chair, for his tireless efforts

(continues on page 2)

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Vol. 5 No. 1 - May 2007

Social behavior and Conservation...

"This is the first evidence that a predator training regime, which incorporates the target species social environment, can mimic experiences in the wild and improve long term survival post-release..." says **Debra M. Shier** in our Feature Article: ***"Social influences on predator training for conservation"*** (see page 6)

In this issue

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annual meetings of the Animal Behavior Society will take place in Burlington, VT, July 21-26

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Julie Jedlicka receives *ABS Edward O. Wilson Conservation Award*

Project: nesting success and foraging behavior of cavity-nesting birds in vineyard landscapes, page 11

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Where does the conservation behaviorist fit in?

FORUM: contrasting views by **Richard Buchholz** and **Colleen Cassady St. Clair**, page 7

In this issue

A Conversation with **Daniel T. Blumstein**: *"...Society should care about conservation behavior because behavioral biologists may have tools that can be used to help manage animal populations but have not yet been used. Understanding how animals choose mates, select habitat, and avoid predators are all useful things that behavioral biologists study...,"* page 2