summer, his team traveled to the living laboratory of Mpala Research Centre in Kenya to examine social networks among baboons. Kays’ team gently captured and outfitted 30 baboons with high-resolution GPS collars that recorded movement of the pack at one-second intervals.

As biodiversity assistant director, Michelle Trautwein runs other projects in Kays’ laboratory as an adjunct faculty member in the Department of Entomology. She works with Brian Wiegmann on the evolutionary history of insects and flies.

Both Kays and Trautwein are gifted science communicators. Kays has written for The New York Times’ “Scientist At Work” series while Trautwein appears regularly on local television and radio, such as Frank Stasio’s “The State of Things” on WUNC.

In addition, Trautwein leads the laboratory’s efforts on the Arthropods of Our Homes project with NC State biologist and NRC advisory board member Rob Dunn. Holly Menninger, Dunn’s director of public science, is a fixture at the NRC not only on these research projects but in giving public presentations and mentoring students and volunteers.

DIVIDENDS OF PROXIMITY

Julie Horvath, director of the NRC Genomics and Microbiology Research Laboratory has her faculty appointment in the Department of Biology at NC Central University. Nevertheless, the short distance to NC State and the frequent traffic of NC State faculty and students has led her laboratory to also participate with Dunn’s group on an extension of their microbiome work.

Following from the Dunn lab’s Belly Button Biodiversity Project, the team is investigating the role that microbial diversity of the axillae (armpits) plays across primate species, particularly with regard to mating behavior. Armpit odors don’t come from us directly by rather from resident bacteria metabolizing chemicals in our sweat. Examining the biodiversity of those microbes inhabiting our armpits might reveal more about our social patterns than our more obvious physical and personality characteristics.

Horvath’s assistant director, Julie Urban, worked with NC State undergraduate Meg Ehlers and Dunn lab postdoctoral fellow Dan Fergus on the pilot phase of the project (#PfStart). Fergus is sequencing marker regions of the DNA of 600 isolates to identify the bacterial species. The project will next examine how deodorant and bathing habits affect these bacterial populations.

Urban is also continuing work here that may initially seem unrelated. She is a specialist in the biology of planthoppers, insects that display unusual head morphology and elaborate plumes. NC State biology major Lexis Hohman is working with Urban to identify symbiotic bacteria living inside of planthoppers.

The location of the Nature Research Center only miles from the NC State campus has created a similar cooperative relationship between two state institutions with distinct strengths and shared goals. Creative relationships such as these are the foundation for NC State as it ventures into its next 125 years.

Communicating Science

By David Kroll

Like four of the Nature Research Center’s laboratory directors, my position as director of science communication is another partnership with NC State. As an adjunct associate professor of English, I teach graduate students science writing for the media and undergraduates the principles of news and article writing.

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• 2009 Industrial Extension Service reaches goal of creating $1 billion in economic value to NC manufacturers in less than 4 years.

• 2009 The Entrepreneurship Initiative launches the eGames student competition.

• 2010 Glenn Kleiman, Friday Institute director, is key partner in NC receiving $400 million in federal Race to the Top education funds.

• 2010 Michael Steer’s team identifies ways to identify improvised explosive devices, now used by U.S. troops.
My 20-year academic research career focused on the discovery of anticancer drugs from natural sources such as plants and microorganisms, instilling a deep respect for nature’s chemistry laboratory. I began my independent career at the University of Colorado School of Pharmacy from 1992 to 2001, and split my time in North Carolina between Duke University, Research Triangle Institute (now RTI International) and North Carolina Central University before joining the Museum of Natural Sciences last January.

Dean Jeff Braden notes that getting me appointed to the graduate English faculty “certainly raised some eyebrows on campus.” But he explains, “We felt it was essential that the College of Humanities and Social Sciences be involved with the NRC because, although the natural sciences are not in our college, the study of public opinion, discourse, and understanding of sciences is.” Effective science communications requires scholars from multiple disciplines, he adds.

I’ve always been involved in providing accessible science and medical information to the public — everyone who has taken prescription and over-the-counter drugs — and health professionals. While at Colorado, I benefited from fruitful interactions with broadcast and print media. These experiences led me to appreciate the role of journalism in serving the public with objective and easily consumable information on the science that affects daily lives.

My current focus is to combine my expertise in communicating complex scientific topics with my digital media efforts dating back to my first blog in late 2005. I’m currently a regular contributor to the pharmaceutical and healthcare section of Forbes.com and write on science education issues for the CENtral Science blog platform of Chemical & Engineering News, the news magazine of the American Chemical Society.

As scientists are increasingly called on to engage with the public, funders and policy makers, my focus at NC State is to enhance didactic and practical offerings in science writing, the public understanding of science and science policy. In addition, I’m working with museum and NC State faculty colleagues on social media approaches to science communication. All of these areas are fertile ground for joint research projects with faculty and students.

Communication skills are becoming more important for doctoral trainees in the sciences and engineering as the employment market for traditional laboratory positions lags. Last fall, half of the students in my graduate science writing course were NC State graduate students in the sciences. Some sought to incorporate freelance writing into their careers while others simply wanted to learn skills to improve their communication with non-scientists. I’m currently working with Department of Communication chair Ken Zagacki and his faculty to broaden these interdisciplinary offerings across the campus.

In this partnership, NC State students and faculty will have access to resources to tell the stories of a 134-year-old North Carolina institution that has itself transitioned into a more interactive space for social engagement with the scientific process.

Similarly, NC State students and faculty can work via public outreach programs managed with my colleagues — Deputy Director of Education Katey Ahmann and Assistant Director of Science Communications Brian Malow — such as science cafés, “meet the scientist” small group discussions, science trivia nights and multimedia presentations in the museum’s marquee theater, the SECU Daily Planet.

We welcome students, faculty, staff and members of the community to join us for any of these daily and weekly events. Stay up-to-date with all of the museum’s activities at naturalsciences.org, on Twitter @naturalsciences, or on Facebook at facebook.com/naturalsciences.