

Beloit

COLLEGE MAGAZINE

FALL/WINTER 2008

What They Brought

From a voice-changing helmet
to an Indian tapestry:
what students packed for
their first year at Beloit

ALSO

Mark Moffett '79
and the Wild Things

Former Secretary of
Labor Has His Say

Two Science Centers

100 Years at Beloit

An Up-Close and Personal
Homecoming



A Walk on the *Wild Side*



Mark Moffett '79 took this photo of the endangered golden poison dart frog in Colombia's Choco region.



Wandering naturalist Mark Moffett's adventures on five continents have led to discoveries related to ants, frogs, forest canopies, beetles, and photography, as well as to books, popular science articles, and even appearances on late-night television.

By Ann Bausum '79

THE ESSENCE OF MARK MOFFETT '79 can be boiled down into one word: story. Whether he's fleeing bull elephants by climbing a tree in India, hauling 85 pounds of gear on treks across the Galapagos Islands, or swinging from a rope in the tree canopies of Borneo, Moffett is collecting stories even as he discovers new species and makes scientific history.

Moffett, an entomologist who answers to the nickname "Dr. Bugs," graduated with Phi Beta Kappa honors from Beloit before heading to Harvard University. Nothing about his childhood, education, or career follows a predictable trajectory, a fact that helps make his own story so irresistibly attractive.

This Colorado native grew up in Beloit while his father, Don Moffett, worked at the College. Mark Moffett spent his childhood climbing trees, collecting bugs, raising snakes, and generally indulging

the scientific urges that continue to drive him today.

By the time he reached his junior year in high school, Moffett was already taking courses and hanging out in the Chamberlin Hall of Science. Eventually he walked away from high school without a diploma (having failed to complete his PE requirements) and took up study full time at Beloit College.

Even then, his career followed an unconventional path. Although he majored in biology, Moffett took extra classes in English, Spanish, and anthropology. "I figured I could learn biology on my own," he notes. He avoided exams, undertook plenty of independent study, and sought out influential mentors such as Biology Professor John Jungck.

Upon reaching Harvard, Moffett avoided the traditional program of study, too. With the consent of his advisor, noted biologist Edward O. Wilson, Moffett skipped out on the usual pro-

gression of classes. Instead, he headed off to Asia, where he studied ants for 29 months—surviving on limited grant funds, ingenuity, and the most frugal of budgets. "Mark has the soul of a 19th-century explorer, a wandering naturalist in the tradition of Darwin," Wilson has observed.

Moffett's field work in graduate school led him to 12 countries and yielded enough discoveries to fuel some 50 research papers, a dissertation on marauder ants, and a string of popular science articles. In the process, he earned Harvard's Bowdoin Prize in 1986, the university's top award for writing.

"I see students go down these academic paths that are exhausting. I wouldn't have survived," he admits, grateful to have been able to follow a different course of study. "Creative people have a knack for slipping through the system—which is good."

ANTS AS SUPERMODELS

Moffett's career success flows from his seamless blending of science with the art of photography, using skills that he honed during his doctoral field work. "Anticipating I would make extraordinary discoveries," Moffett explains with his storyteller's wit, "I decided my doctoral committee might wonder if I had been smoking exotic

substances with a guru unless I returned with solid documentation."

Moffett decided he would need photographic evidence of his discoveries. He turned to Madison Avenue for inspiration, borrowing techniques used in photographing supermodels but applying them on a miniature scale. The resulting images not only proved his stories; the techniques he used to create them also

When *National Geographic Magazine* editors glimpsed his first rolls of film in the early 1980s, they became so excited that they flew a representative to meet him in India and commissioned an article for the magazine. The resulting photo feature—and four more—appeared in the magazine by the time he'd earned his doctoral degree.

Moffett has gone on to pen more than 20 additional articles for *National Geographic* and to see almost 500 of his images published in the magazine. Five of his photographs were among those chosen for the magazine's special edition publication of the "100 Best Nature Pictures."

In addition to writing for popular science magazines like *National Geographic*, Moffett continues to author peer-reviewed scholarly articles as well as books. Harvard University Press published his first book, *The High Frontier—Exploring the Tropical Rainforest Canopy* (1994). A review in the *New York Times* described it as "a kind of cross between an adventure story ... and poetic biology."

The University of California will bring out a new major work by Moffett in 2010 titled *How to Hunt Like an Army Ant: The Life of Insect Foragers*. The work is based on years of research in a dozen countries and blends art, science, nature, and photography into what has become Moffett's signature storytelling style.

Those same skills are behind another book on its way to publication, *New York Underfoot: The City Art of a Rainforest Ecologist*, from fine arts publisher Quantuck Lane Press. This work features some 300 images taken by Moffett of New York City landscapes as seen from the vantage point of an ant.



Mark W. Moffett '79

A group of leafcutter ants carries its bounty back to the nest in Barro Colorado Island, Panama. Mark Moffett taught himself how to take pictures of his tiny subjects by studying techniques for photographing supermodels.

helped transform the art of macro photography.

By necessity, Moffett had to economize and improvise with his early equipment, investing no more than \$230 and living with a multi-point flash system that frequently discharged electrical shocks. He recommends this frugal approach to others: "What you *need* is the stories. Don't get overwhelmed by the gear. Getting the skills as a writer or photographer is secondary. I kept looking for stories."



Mark W. Moffett '79

An army ant bites Moffett's finger. "I'm kind of famous for having some part of my anatomy appear in every *National Geographic* story," he says.

Moffett, who switched from film to digital photography in 2006, has rounded out his diversity as an author by publishing his first book for children—*Face to Face with Frogs*—earlier this year through National Geographic Children's Books.

PRACTICE WITH BLOWGUNS

The explorer's obvious comfort level in diverse forums is evident whether Moffett is among his peers—such as the 60 or so people on the planet who are experts on ants—or appearing before the general public. "It's very cool when you find something new and tell a story no one has expected," Moffett notes.

Viewers of television shows like *Late Night with Conan O'Brien* and *The Colbert Report* might be unable to imagine their interest in some of the world's slimiest creatures until Moffett steps onto the stage in his field gear, plops a banana slug down on the set in front of his host, and begins to discuss the creature's sex life in the most graphic and hilarious of terms.

A trip to Moffett's Web site transports visitors behind the scenes of his adventuresome life and explains why he's been dubbed the "Indiana Jones of Entomology." (See: www.doctorbugs.com)

Moffett introduces himself in cyberspace through stories: "I have often used my wits to survive ... eating scorpions, spiders, and grubs with the native peoples of five continents ... discovering an

Aztec burial chamber populated with blind cave tarantulas ... tracking down frogs so lethal, their touch can kill ... using blowguns in defense against Colombian drug lords ... accidentally sitting on a fer-de-lance, the deadliest snake of the Americas."

Such stories are the product of the relentless pursuit of field research over a period of three decades in more than 70 countries. Moffett's travels have led him to explore the behavior of social insects (especially ants), the biology of frogs (including his discovery of mothering behavior in nature by a poison dart frog in Panama), and the ecology of forest canopies (where he could lay claim to having climbed the world's highest tree until a colleague found a taller one later on).

Moffett has discovered many new plant and animal species. Four bear his name; author and friend Amy Tan created an additional (fictional) one for him in her best-selling book *Saving Fish from Drowning*, which features a character with his name.

THE INDIANA JONES OF BUGS

His penchant for exploration, discovery, innovation, and creative teamwork brought Moffett back to his alma mater earlier this year to accept an award named for another Beloit alumnus and explorer—Roy Chapman Andrews (1906). The lives and careers of these two men offer uncanny parallels. Andrews,

too, grew up in Beloit, raised himself to be a naturalist, cherry-picked his way through the college curriculum, and set off to become an explorer with a confidence and tenacity akin to Moffett's.

In 1906, Andrews talked his way into a job at the American Museum of Natural History in New York City and proceeded to become one of the most celebrated explorers of the 20th century. Andrews' fame has revived in recent years following the publication of new books about him, the formation of a namesake organization in Beloit, and, perhaps most significantly, the persistent rumors that he served as the real-life model for the Hollywood character "Indiana Jones."

When Moffett received the Roy Chapman Andrews Society Distinguished Explorer Award last February, he joined an elite group of contemporary explorers. Other recipients of the honor include Robert Ballard, the marine scientist who discovered the *Titanic*, climate scientists Lonnie Thompson and Ellen Mosley Thompson of *An Inconvenient Truth* fame, and planetary geologist Steve Squyres, the scientist behind the Mars rovers. (More about the award is on the Web: www.roychapmanandrewssociety.org/distinguish.html)

During Moffett's stay, the School District of Beloit surprised him by presenting him with an honorary high



In the Atlantic Forest, Brazil, Moffett captures a photograph of this species of frog (*Hylodes Asper*) repeatedly kicking its legs from left to right as it marks its turf and tries to attract mates.

Mark W. Moffett '79

school diploma, technically ending his long-standing claim of being a high-school dropout who earned a Ph.D. degree from Harvard.

Moffett entertained an auditorium full of area middle school and high school students the next day. He told stories about ants, holding the rapt attention of 1,000 normally restless teens and tweens and engaging their questions with a humor and honesty that soon had hundreds of hands waving in the air with hopes of capturing his attention.

"What's the grossest thing you ever ate?" asks one student. Moffett, who has acquired a long list of potential answers, pauses to consider his best choice. "An ant omelet," he decides, eliciting groans from the audience.

"What's the nastiest thing that's stung you?" asks another student. This list of possible answers is long, too, but Moffett doesn't hesitate: "Bulldog ants. If you get stung by 30 at once, you'll die. You can feel the needle going in," he adds for effect.

NATURE AS MIXED MEDIA

In addition to receiving the Andrews award, Moffett was awarded the Lowell Thomas Medal for Exploration from Rolex and the Explorers Club in 2006 (he rappelled into the ceremony) and, in 2007, a Lifetime Achievement Award in Science and Exploration from the Museum of Long Island.

Moffett has held academic posts at Harvard, the University of California-Berkeley, and the Smithsonian, where he now serves as a research associate in entomology. In addition, Yale has hosted him this year as its Poynter Journalism Fellow. His photography will be exhibited in 2009 at the Smithsonian's National Museum of Natural History.

Increasingly, Moffett is looking for "new ways of getting stories across about nature and conservation that haven't been heard before," he says. "I want to find stories that resonate with people's hearts. Biodiversity arguments aren't compelling enough." Lately, he is mixing media—art, music, film, and science—in

ways that evoke an emotional response in his audience. "I like to mix things up and surprise people, make people fall in love with things they haven't looked at before or think they don't even like."

Field work remains a vital part of his yearly calendar. A study of monodominant rain forests in the Congo—forests with only one species of trees—is among his present plans. As always, the risks of exploration go along with its thrills.

"For it to be real nature, there has to be the chance that it can hurt you."

Moffett witnessed this reality in a deeply personal way during an expedition in Myanmar in 2001. When expedition leader Joseph Slowinski, a herpetologist, received a poisonous snake bite, Moffett and other colleagues became his emergency response team. Despite heroic efforts, including 26 hours of artificial respiration and three hours of CPR, the man died 28 hours after being bitten.

Only later did Moffett and other members of the expedition party emerge from

isolation to learn that their team leader's fate had been sealed on a date weighted with an even broader tragedy, the terrorist attacks of September 11. Moffett wears a ring in the shape of a serpent as a reminder of his lost friend and colleague.

If anything, the death of a fellow explorer seems to inspire survivors to carry on with renewed determination, rather than to deter them. Risk—and reward—are wrapped up as one in exploration. The award Moffett took home from his winter visit to Beloit is inscribed with an Andrews quote: "Always there has been an adventure just around the corner...and the world is still full of corners!"

Moffett agrees: "People think that the world has been explored, but that's not true," he says. He clearly has not run out of places to visit or fresh stories to uncover. There are new species to discover, perhaps an even taller tree to find—and climb.

When asked in February by a Beloit public school student, "What's your favorite frog?" Moffett doesn't hesitate for a moment. "My favorite frog is the one I am going to find next."

Ann Bausum '79—a former editor of Beloit College Magazine, classmate of Moffett's, and founding board member of the Roy Chapman Andrews Society—is fascinated by stories, too. Among the seven books about U.S. history that she has published with National Geographic Children's Books is a photobiography about Roy Chapman Andrews. Visit her on the Web at www.AnnBausum.com.

National Geographic has published nearly 500 of Moffett's photographs. In 2009, a photographic exhibit of his research on ants will open at the Smithsonian Institution.

Frank J. Sulloway

