KIRSTEN HINES

John Iverson's research on the behavior and ecology of Bahamian Rock Iguanas earned him a permanent position in the "iguana hall of fame." John measures a *Cyclura rileyi* from the introduced population on Bush Hill Cay in 2005.

PROFILE

John Iverson: Researcher, Teacher, Friend

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For almost 30 years, biologist John Iverson has successfully conducted three long-term field studies recognized throughout the world; together they represent nearly a cumulative century of work. Studies in northern Indiana focus on a variety of turtle species, work in western Nebraska examines turtles and snakes, and research in the Exuma Islands of the Bahamas investigates Rock Iguanas. Any one of these would represent the life's work of an accomplished field biologist; leading *three* studies for three decades is unprecedented. When John isn't in the field, crunching data or writing, he can be found in the classroom teaching, leading students on local field trips, or working with student curators at Earlham College's Joseph Moore Museum of Natural History. John has been a member of Earlham's faculty since 1978 and has been Museum Director since 1982.

In a quiet moment, you might find him in his office advising a student (prospective, current, or former), writing a letter of recommendation, or delicately replying to a third-grader's e-mail that begins, "Dear Dr. Iverson, I am doing a book report on turtles. Can you tell me everything you know about turtles?" In his "free time," you will find him in the woods clearing invasive plants, reforesting a 71-acre tract that he has deeded as a conservation area, or working to reintroduce native amphibians into his many man-made ponds.

Born and raised on a horse farm near Omaha, Nebraska, John credits his maternal grandmother Betsy with fostering his wildlife interests. A highlight of his childhood was the one week every summer he spent with her fishing, camping, and exploring nearby ponds and streams, all the while gathering as many herps as possible. He reminisces, "I grew up on a farm and there were always turtles walking around, or there were ponds around with frogs and salamanders and snakes. So I always had a snake in my shirt, you know, the classic tow-headed boy with a frog in his pocket."

John attended Nebraska public schools until graduating in 1967, after which he enrolled in Hastings College, about 160 miles

LYNNE PIEPER

John's seminal Rock Iguana work in the Bahamas makes him the man to go to for information on life histories of these magnificent animals. This is an Allen Cays Iguana, *Cyclura cychlura inornata*.

west of Omaha. As an undergraduate student at Hastings, John met biology professor Gilbert Adrian. Adrian, like John's Grandma Betsy, loved wildlife and the outdoors, and had a deep and profound influence on John. "Gilbert Adrian was and is my inspiration, from his photographic memory to his energy and enthusiasm," says John. "Once I went into the field with him, I became a field biologist. He just turned me on to biology; there's no other way to put it."

John graduated *Summa Cum Laude* from Hastings College in 1971 with majors in both biology and mathematics, and a minor in chemistry. Following graduation, he married his high school sweetheart and partner for life, Sheila. The young couple immediately packed their meager possessions into a dying car and headed to Florida for John to attend graduate school at the University of Florida (UF) in Gainesville. Sheila worked first as a teacher's aide at a school 30 miles from Gainesville and then secured a teaching position at a local school. This was their only steady income for the first eight years as John entrenched himself in graduate research.

At UF, John's hard work and dedication immediately impressed his graduate advisor, Dr. Walter Auffenberg. Auffenberg knew that John did not come from a privileged background and that everything he had accomplished he had earned through hard work and persistence. He saw an intelligent, capable young man who had the talent and grit to succeed. John's master's work on geographic variation in the Musk Turtle (*Sternotherus minor)* was completed in 1974 and earned him the nickname "Turtle Guy." Soon he would begin work that earned him the further title of "Iguana-man."

Confident that John could complete his master's and take on an additional project, Auffenberg made John Assistant Investigator on his New York Zoological Society grant to study the West Indian Rock Iguana, *Cyclura carinata* in 1973. During this period, John was completing his master's, beginning the work that would lead to his Ph.D. and expanding his turtle involvement by becoming a research assistant to Dr. Archie Carr, for whom he worked on the standardization, computerization, and analysis of 20 years of sea turtle data.

After 26 weeks in the field between 1973 and 1976, John's research on the behavior and ecology of *Cyclura carinata* earned him a Ph.D. in Zoology and a permanent position in the "iguana hall of fame." This work dramatically increased our knowledge of iguana biology and natural history.

Rick Hudson, Conservation Biologist at the Fort Worth Zoo and former co-chair of the IUCN Iguana Specialist Group, touts John as the go-to guy for *Cyclura*, in part because of his *C. carinata* research. "(John's) contributions to the Iguana Specialist Group are immeasurable; John is the official repository of *Cyclura* life history data. When you talk about the vulnerability of rock iguanas to introduced mammals, you always cite his seminal work on *Cyclura carinata* in the late 1970s."

IVERSON FAMILY

John Burton Iverson at home in Nebraska in 1961.

ALLISON HUNNICUTT

When John isn't in the field, crunching data or writing, he can be found in the classroom teaching, leading students on local field trips, or working with student curators at Earlham College's Joseph Moore Museum of Natural History.

Upon completing his Ph.D. in 1977, John was hired as Adjunct Assistant Curator of Herpetology for the Florida State Museum at UF. During this time, he was principal investigator for a study of *Kinosternon* turtles and continued working with Dr. Carr analyzing data on sea turtles. As his prolific research efforts continued, John's mentoring gifts also began to blossom.

Ron Magill, now Communications and Media Director for Miami Metrozoo, was an 18-year-old undergraduate student at UF when he met John. "I was privileged to work with John at a pivotal time in my life. I was lucky enough to get a job working in the herp range at the Florida State Museum in Gainesville typing tags for all of the pickled herps that were being collected by a variety of grad students, professors, etc. I got along well with my supervisor, Peter Meylan, and, because I spoke Spanish, I was asked if I would like to go to Mexico with him and John for a mud turtle study John was doing under an NSF grant."

"There is no way to describe how special it felt to be accompanying these two legendary 'herpers' on a collecting trip to Mexico. I felt as if I had won the lottery! I'll never forget loading up all of our stuff into John's old orange and white VW bus and just hitting the road. At first, I was intimidated being with 'Dr. Iverson' and Peter, but from the get-go, they made it obvious that I was no longer the undergrad, but a real part of the team. That trip is a huge cornerstone of my successful career today. I learned more from John and Peter during three weeks in Mexico than I learned all year at the University. More than that, I have never had so much fun on an expedition as I did with John."

In 1978, John relocated to Indiana to become a biology professor at Earlham College. He continued to secure grants to study turtles and iguanas and made it a point to include students on his trips. In the summer of 1979, looking to begin new projects in the area, John embarked on a large-scale mark-and-recapture turtle project at Dewart Lake in northern Indiana. This study has resulted in many

John has been known to nod off when he runs low on Mountain Dew and Little Debbies.

publications focusing on changes in sex ratios in musk turtles, daily activity patterns in each of the species, and long-term changes in the turtle species composition at the site.

In 1980, John began exploring the natural history of Ornate Box Turtles (*Terrapene ornata*) and Yellow Mud Turtles (*Kinosternon flavescens)* among many other species of turtles, snakes, and lizards at the Crescent Lake National Wildlife Refuge in the sandhills of western Nebraska. John knew that this was the perfect site for a long-term study because it was remote and the animal populations were relatively undisturbed. The area's designation as a National Wildlife Refuge made it unlikely that housing developments or highways would be built there. "The data that we've collected on turtles in western Nebraska [shows] that some of these turtles live for 75 years or longer," John explains. "We've found one of the species of turtles that's out there is the only turtle species in the world that nests while it is underground. It crawls up into the hills and buries itself completely underground for several days. Then while it's buried, it digs a nest underground and then it digs back out and moves back to the water. No other turtle in the world does that." In addition to gaining a better understanding of these species' basic biology, long-term studies of relatively undisturbed turtle populations provide benchmarks for comparison with data from populations increasingly impacted by humans. The conservation implications of this type of work are vast.

RON MAGILL

John and Ron Magill with a trap full of Mud Turtles (*Kinosternon*) in 1978.

Herpetologist Peter Meylan is R.R. Hallin Professor of Natural Sciences at Eckerd College in St. Petersburg, Florida. He started as an undergrad at UF at the same time that John started as a grad student. He explains, "John is one of the world's leading authorities on freshwater turtles. He has studied and written about turtles belonging to most living families, but is particularly well-known for his work on the families Kinosternidae (mud and musk turtles) and Geoemydidae (Old-World pond turtles). John's work as a turtle ecologist is also well known. His study of the Yellow Mud Turtle in the Nebraska sandhills makes this one of the most completely known life histories of any turtle species. He has also published important ecological studies of Painted Turtles, Ornate Box Turtles, and others, as well as summary papers that have reviewed patterns of survivorship, growth, maturation, and species richness of turtles world-wide. He was recently a major contributor to a workshop on *Genetics, Ethics, and Taxonomy of Tortoises and Freshwater Turtles* held at Harvard. As a part of that workshop, he led the effort to try to compile a single tree of life for all turtles."

Wanting to continue his work with rock iguanas, John started a new *Cyclura* project in 1980 focusing on the Allen Cays Rock Iguana (*C. cychlura inornata*) in the Bahamas. For the first two expeditions, John arranged a team through the Center for Field Research (Earthwatch). With subsequent trips, he has recruited field assistants from among his growing pool of current and former students.

This study remains ongoing and is now one of the longest, continuous field studies of any lizard in the world. John's dedication and work on this species have yielded numerous publications on the life history and ecology of this critically endangered iguana, information that has proved vital for developing conservation plans for this and other species.

In 1986, John self-published a book entitled *Checklist with Distribution Maps of the Turtles of the World* (revised and reprinted in 1992). This publication represents a compilation of all locality records from colleagues, museums, and the literature for each of the world's turtle species. John started amassing this information in 1972 and this book is still a standard reference for turtle biologists around the world.

As if launching field studies, teaching and publishing were not enough, John and his wife started a family during this period. Sons Peter and Matthew (born in 1984 and 1987) grew up alongside a myriad of animals and college students. They spent summers driving across the country and exploring the wild beauty of western Nebraska, joining the team as John's youngest field assistants, while Sheila made sure base camp was operational.

In 1989, with funding from the EPA and NSF (through Oregon State University), an electronic version of John's *Checklist with Distribution Maps of the Turtles of the World* went on-line. Designed for conservationists and researchers, but available to all who have an interest, the site remains an invaluable source of timely and comprehensive information about taxonomic and distribution data for the world's 200-plus land and freshwater turtles.

John is world renowned for his work with iguanas, turtles, and a slew of other creatures. In the last ten years alone, he has served as reviewer for 18 scientific journals including *Biological Conservation*, *Ecology*, *Copeia*, and *Herpetologica*. Biologists have paid tribute to his many contributions to the scientific field by naming several new species after him. He has published over 150 papers in which he is the first author and countless more where he is part of a collaborative effort with other professors, professionals, and students. As Ron Magill pointed out above, John never thinks of people in a hierarchical manner, everyone brings something unique and interesting to the table, and everyone is an equal when doing science with John.

John's talent as a teacher and mentor who engages and inspires others reflects a deeply held belief in the critical connection between science and education. "It is not enough simply to *teach* students about science. Rather, we must teach students how to *do* science," John explains. He describes himself not as a teacher so much as "an assistant in learning." "Collaboration in and out of the classroom is of utmost importance to me," John says. He believes that the "synergistic educational relationships" allow all those involved to "learn more and teach better than (they) possibly could alone." Former Earlham College Provost Len Clark states, "He is truly a teacher and scholar with unusual reach and influence."

"John epitomizes what it means to be a great teacher," says biologist Geoff Smith. Under John's guidance, Geoff was challenged by the opportunity to take a junior-level course, Vertebrate Zoology, his first year at Earlham College. "My own courses that I now teach (at Denison University), including Vertebrate Zoology, can trace their roots back to that class and how John got his students engaged in doing biology," says Geoff. "I owe much of my success as a faculty member at a liberal arts school to what I learned from John as an undergraduate."

Many of John's students look to him and see him in the same light that he saw his undergraduate mentor, Gilbert — passionate, dedicated and inspirational. "I can remember one incredibly cold, rainy night in the field with John in southern Indiana," recalls Stesha Pasachnik (currently completing a Ph.D. focusing on iguana conservation). "John had found me earlier in the day and told me that the amphibians were moving and we had to go. Classes ended, we loaded the van with equipment and we hit the road. Reaching the field site, it was clear that John couldn't have been more correct. We could barely get the van to the ponds because the roads were alive with amphibians. Finally reaching the ponds, the sight was magnificent. Spotted Salamanders seemed to be dancing to the beat of the raindrops, swimming effortlessly to the surface for a bit of air, and then plummeting rapidly back to the action on the pond floor. I had never seen anything like it. John had opened my eyes to a career path that I did not know was possible."

Hundreds of students have traveled with John to conduct research in Indiana, more than 50 have made the journey with him to Crescent Lake in Nebraska, and approximately 200 have assisted with research in the Exuma Islands of the Bahamas. Today, with roughly one-fifth of the graduates having majored in biology, Earlham ranks eighth nationally (between Johns Hopkins and the Massachusetts Institute of Technology) in the percentage of its biology majors who eventually have gone on to earn a doctorate in the field. John has been critical in this process and was recognized formally for his "extraordinary dedication to undergraduate teaching" when the Carnegie Foundation named him the 2005 Indiana Professor of the Year for the Advancement of Teaching.

John also has influenced students at other institutions, at times even before meeting them in person. Chuck Knapp (currently a CRES post-doctoral fellow) recalls. "Prior to entering graduate school, I wrote a brief article concerning an iguana survey conducted in the Exumas and sent it to John for review. Though John did not even know me, he painstakingly edited and commented on the manuscript." Chuck still has the original marked copy, his first of many lessons from John.

LYNNE PIEPER

John's drift fence funneled an Eastern Yellow-bellied Racer (*Coluber constrictor*) into a trap at Crescent Lake National Wildlife Refuge, Nebraska.

KATE CARY

Pulling a "Snapper" (*Chelydra serpentina*) out of a net at Rattlesnake Pond, Nebraska in 2006. "A turtle by the tail is worth two in the pond."

MOLLYE NARDI

Not afraid to get dirty, John inspires students to attempt feats of daring they were convinced they couldn't do. Here he digs up a *Cyclura cychlura inornata* burrow looking for eggs in 2007.

Somehow, amidst all this drive and achievement, John manages to connect with and inspire people in a very real way. Even sitting in John's office, students watch salamanders splashing in buckets or the Alligator Snapper on the desk. In the field, their hearts sputter as John abruptly stops on the highway, reverses, swerving around oncoming traffic to show off an armadillo or capture a Diamondback Rattlesnake. John brings out the adventurer in all who surround him. Lynne Pieper (another former student of John's, currently a doctoral student at the University of Illinois) explains, "John's like a televangelist-herpetologist — he really gets you going! He catches animals that no one can catch and doesn't get bitten when by every law of animal behavior he should. He inspires us to do what we thought we could not or should not do — go after an iguana down a hole, up a poisonwood tree, or in the middle of a thicket of thorny scrub bushes. Every instinct in your intellect tells you 'Danger, danger!' — that this is *not* a good situation for capturing an animal. Yet John asks the capture team, 'Well, who's going in?' Suddenly, all of the clear-thinking primates who moments ago had determined that this was *not* a good idea, check their common sense at the door. 'Sharp rocks, be damned.' 'Pus-filled-welt-inducing poisonwood, be cursed.' 'Thorns and spines — I defy you.' Amidst a cavalcade of yells and curses, we all spring forward to catch the iguana."

John is a scientist whose passions run deeper than research. He truly loves the animals with which he works and readily sparks that enthusiasm in those around him. In western Nebraska, every quarter-sized mud turtle hatchling in a pit fall trap is a little miracle; on U-Cay in the Exumas, every capture is a new challenge; in his own backyard, every salamander returning to his ponds is incredible. The novelty never wears off for John, and he strives to share this appreciation with future generations. John has not only advanced many fields of research in ways recognized around the world, he has created an army of researchers, teachers, and activists inspired to do great things.

John and his wife Sheila have dedicated their lives to making a positive impact on the world. As if the global influences of John's professional endeavors were not enough, they have also executed a conservation easement on 71 acres of native Indiana ravine forest the couple purchased southwest of Earlham College's campus. The easement not only promises that many native amphibians and reptiles will always have a safe haven in which to thrive, but also that students will have continued access to wild areas for generations to come. Even at home, John has created the perfect scenario for research, teaching, and friendship.

Authors' Note

John has had a dramatic influence on the three of us and we know that's also true for many others, Earlham students being just a small fraction of the number who have had their lives molded by interactions with John. He truly is much more than an amazing researcher and phenomenal mentor — he's one of the most caring and attentive friends you could ever wish to have. As a small thank you for all he's done for us personally, but also for his vast contributions to the planet as a whole, we wrote this paper, unbeknownst to him, as a tribute at the 30-year juncture of his three projects. All three of us have been lucky enough to experience each of these studies, and we look forward to many more years of volunteering on his projects! John, thanks for everything.

Acknowledgements

We would like to thank Rick Hudson, Sheila Iverson, Dr. Charles Knapp, Ron Magill, Dr. Peter Meylan, and Dr. Geoffrey Smith for their contributions. John Iverson's quotations are reprinted courtesy of Hastings College and the Public Affairs staff of Earlham College.

LYNNE PIEPER

Every quarter-sized Mud Turtle (*Kinosternon flavescens*) hatchling is a little miracle.

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CONSERVATION AND NATURAL HISTORY

VOL 16 NUM 1 MAR 2009