

DR. JOHN O. WHITAKER, JR.
DISTINGUISHED PROFESSOR OF ECOLOGY AND
VERTEBRATE NATURAL HISTORY, AN OLD-TIME
NATURALIST PAR EXCELLENCE

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Editor's Note: Periodically the *Proceedings of the IAS* publishes biographical articles honoring living members of the Indiana Academy of Science. These scientists have all served the Academy with great distinction and have made valuable contributions in their respective fields of scientific inquiry. Dr. John O. Whitaker, Jr., Professor Emeritus in the Department of Biology at Indiana State University has been chosen for this recognition and great honor.

INTRODUCTION

I am honored and exceedingly pleased to have been invited by Dr. Don Ruch of Ball State University to compile the next article in this series, which features the professional life and accomplishments of Dr. John O. Whitaker, Jr. – my career-long colleague, close friend, and confidant (Fig. 1). John's professional career of well more than 50 years, which continues unabated at this writing, features his continuing excellence in all three of the basic aspects of academic endeavor: namely *Teaching*, *Research*, and *Publication*. My daunting task is how to do justice to a career that has excelled as remarkably in all three areas of scientific activity for so many decades.

Without question, John Whitaker's forte has been research and publication, having produced more than 400 scientific articles, reviews, book chapters, and books in print since his 1957 article in *Entomological News*. Rare is the journal featuring vertebrate natural history or ecology that has not published at least one of his articles.

AN EARLY BEGINNING

John had the distinct advantage of beginning his career interest in natural history at a very young age. He was born in Oneonta, in upstate New York, in 1935 (Fig. 2). As a youth, he was a keen observer of nature and an inveterate collector of outdoorsy things, especially nature objects and organisms. When I first came to know him back in the 1960s, he told me of the museum

he started as a child in his parents' basement for his outdoorsy treasures. He even charged his boyhood friends a penny to tour his collection. He told me, with his sly smile, that "he probably made a dime" from the admission fees!

John benefited greatly from his early acquaintance with Robert E. Goodwin, then a graduate student at Cornell, who took him on many field trips and taught him how to make mammal study skins when John was around 12 years old. In his catalog Bob had written REG as the processor, so John followed his example and did the same. A year or so later he realized those were Bob's initials and did not stand for "regular" as he had thought. From then on he used the designation JOW.

When John was in the 8th grade he and his brother Bill traveled with Bob to South Carolina. John brought a copperhead back and promptly took the snake out into his backyard to photograph it. When the neighbor looked over and saw what he was doing she became very upset because she was afraid it was going to get loose and end up in her yard. John's mother, Ruth, was also very afraid of snakes, but never let her son know that.

Around this same time period, John picked up a road-killed skunk and brought it home to process. As might be imagined, it smelled terrible and he took it outside. He picked a good spot to work between his house and the next-door neighbor's garage but the smell remained too terrible to ignore; he threw it out in an old creek bed. John still considers Bob "one of [his] three fathers" (along with JOW, Sr., and his graduate advisor, William J. Hamilton, Jr.).

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Figure 1.—John O. Whitaker, Jr. in the field.

Ever ready for outdoor activity, John regularly accompanied the Ornithology class at Oneonta State Teachers College on their field trips, helping to find and identify birds. It also should be noted that John found time to become the New York



Figure 2.—John at home in upstate New York.

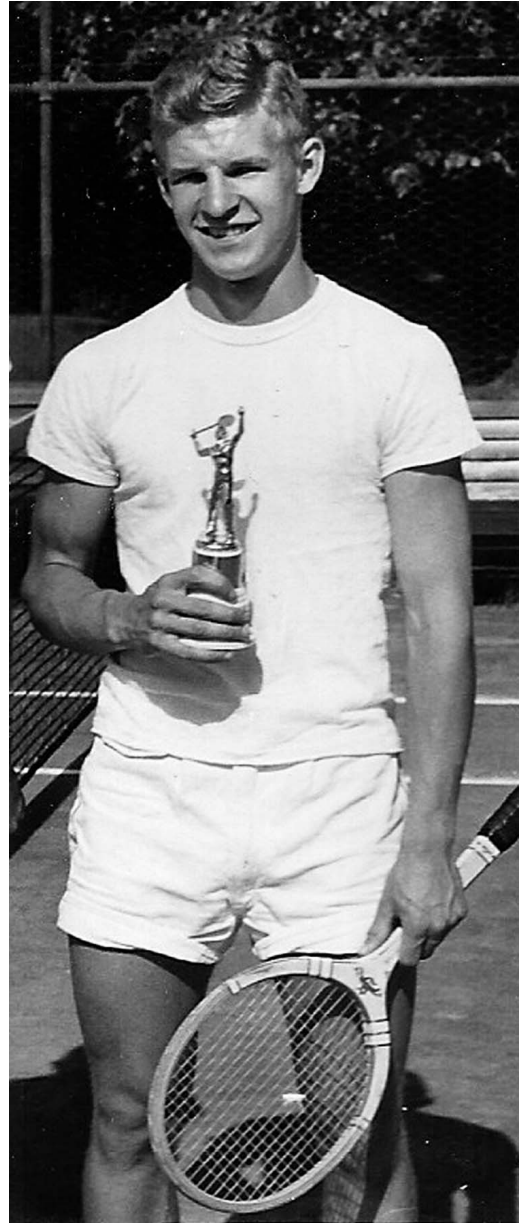


Figure 3.—John Whitaker, New York State high school tennis champion.

high school tennis champion two years in a row, with two different partners (Fig. 3).

Since he was the eldest child in a family of three boys, it was assumed that he would follow in his father's successful dental practice in Oneonta, New York, as a career. His dad had served during World War II as a U.S. Army dentist and was the head of the dental unit at Bowling Field in

Washington, D.C. He had some military notables as patients during his tour of active duty, including Army General George Patton and F.D.R.'s son.

But John O. Whitaker, Jr., had a different objective in mind for his career. One day when he was in eighth grade, he was helping his mother clear the kitchen following a family meal, when she told him abruptly, "John, you know that you don't have to become a dentist if you don't want to." Whereupon he stated matter-of-factly, "Good, then I won't. I would rather go to Cornell University and study Vertebrate Natural History." At that young age, the die was cast for him to become a natural historian, a most fortunate choice, both for him and for that field of study. Although John has examined many teeth of other (non-human) mammalian species, neither John Jr. nor either of his two brothers was to follow their father into dentistry. John, along with his aunt Wanita Whitaker Lewis, his brother Bill, his son Bill, and his daughter Lynne Whitaker O'Brien, did take up John Sr.'s mantle in at least one regard, completing his book on the family genealogy in 1990.

When he was a senior in high school, he met his high school sweetheart, Royce L. Bagg, an education major of Oneonta State Teachers College in New York. They have been married for almost 60 years and are the parents of three successful children, sons John S. and William H. (for Hamilton), both graduate engineers, and daughter Lynne, in communication and education, along with eleven grandchildren, two adopted.

On John's first day at Cornell, he was out looking for birds when he ran into another birdwatcher. That young man, Bob Budliger, turned out to be in John's classes, and later they shared a room. On another occasion he and a different classmate, Jay Eisenhart, went to Pennsylvania to observe a Peregrine Falcon nest near the top of a 300 foot cliff. Jay had brought a rope which they used to descend from the top, and John took pictures of the young birds. It turned out that this was the last nest in the eastern U.S. After they returned to their car, Jay realized he had left his binoculars at the top of the cliff. It was too late to go back to get them, and they had to stay the night. Jay had a sleeping bag, but John ended up with just a burlap bag. Since it was too cold for him to sleep after about 3 a.m., John took the opportunity to jot down the calls of all the birds he heard.

Following his undergraduate study in vertebrate zoology and mammalogy in the Conservation Department at Cornell, John entered graduate work for a PhD at Cornell, under the mentorship of Dr. W.J. Hamilton, Jr., a well-known vertebrate zoologist. John's humor may come in part from his experiences with Hamilton, who was widely known as "Wild Bill," for good reason. John recounts an episode at one of the mammal meetings in springtime where Wild Bill did a little too much imbibing. He was later seen near a pond, trying to croak with the frogs. Even without imbibing, Wild Bill frequently played practical jokes. John recounts stories of Wild Bill, on field trips with the Vertebrate Taxonomy and Natural History classes, finding a salamander, facing sideways to the class, and appearing to throw the creature down his throat and eating it. Of course, he was just throwing it past the side of his head.

John's graduate committee included Dr. R.T. Clausen, plant taxonomist, and Dr. J.G. Franclemont, insect taxonomist – fortunate graduate committee choices indeed, as he already had a great love for studies of food habits. While a student at Cornell, John obtained solid field experience with the New York State Museum and New York Conservation Department. He worked for Paul Connor of the NYSM, and remembers the day that he and Paul encountered some narrow passages in a cave. Paul had an artificial leg, which he removed in order to get through the cave!

As a graduate student John gained teaching experience in a wide array of undergraduate and graduate courses in the natural sciences. His dissertation was on the life history and ectoparasites of the meadow jumping mouse. While Hamilton had advised him to avoid studying ectoparasites, which are difficult to identify, John naturally took this as a challenge and ultimately made it a focus of his life's work.

A PRODUCTIVE CAREER

Following receipt of his doctoral degree in 1962, John had offers from two "Indiana State Colleges" – one in Indiana, Pennsylvania (now Indiana University of Pennsylvania) and one in Terre Haute, now known as Indiana State University (ISU). John accepted the offer from Terre Haute because he thought it had more research potential.

John's first action upon deciding to move to Indiana was to obtain the 12 quadrangle maps of

Vigo County, divide them into 25×25 m plots, and then select 500 plots at random. Upon arriving he began trapping mammals in the plots. He also collected fish throughout the county to learn the distribution of the various species. Each Thursday after class he set traps, to be checked on Friday and Saturday and picked up on Sunday. During the process, he wore out “one car – a brand new car,” he says with a smile. This intensive study proved useful in both research and teaching; as the reigning expert on distribution of vertebrate species in Vigo County, he passed this knowledge to generations of ISU students at both undergraduate and graduate levels. To this day, he continues to participate in “bioblitzes” around the Midwest.

While at ISU, John’s research has covered a wide range of topics. He has published extensively on ectoparasites, food habits, and bats – well over 100 papers on each of these topics – and has authored or co-authored four major books on mammals: *Mammals of Indiana* (two editions, 1982 and 2009), *Mammals of Indiana: A Field Guide* (2010), *The Audubon Field Guide to North American Mammals* (1996), and *Mammals of the Eastern United States* (2nd and 3rd editions, 1979 and 1998). He also served as co-editor of *Habitats and Ecological Communities of Indiana: Presettlement to Present* (2012).

John’s work was not restricted to mammals; he published many papers on fish, reptiles, amphibians, and birds, particularly on their food habits and distribution (Figs. 4–7). And his publications are not all about Indiana – or even North America – but cover the world, from Alaska to Indonesia to Zambia to Brazil, as scientists send their collected food samples and parasites to John for analysis. Over 150 ectoparasitic mites were discovered or described by John himself, and at least seven mites actually bear his name!

In 2005, he founded ISU’s Center for North American Bat Research and Conservation (now Center for Bat Research, Outreach, and Conservation), whose annual bat festival continues to attract thousands of visitors. Many of his students went on to become college professors themselves, while others work for state agencies, consulting firms, and museums throughout the country. One even became the Chief Ecologist for the country of Uganda.

John has earned many awards during his career. He became a fellow in the American Association for the Advancement of Science in 1968 and in the Indiana Academy of Science in 1976; received the

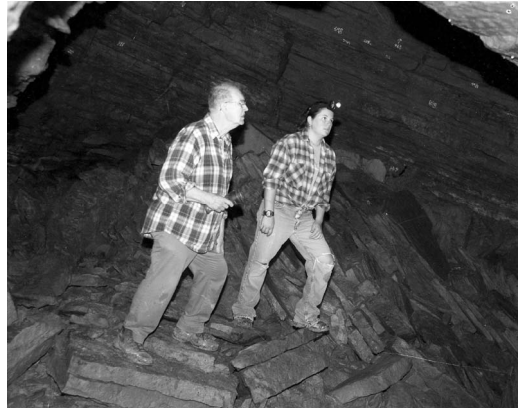


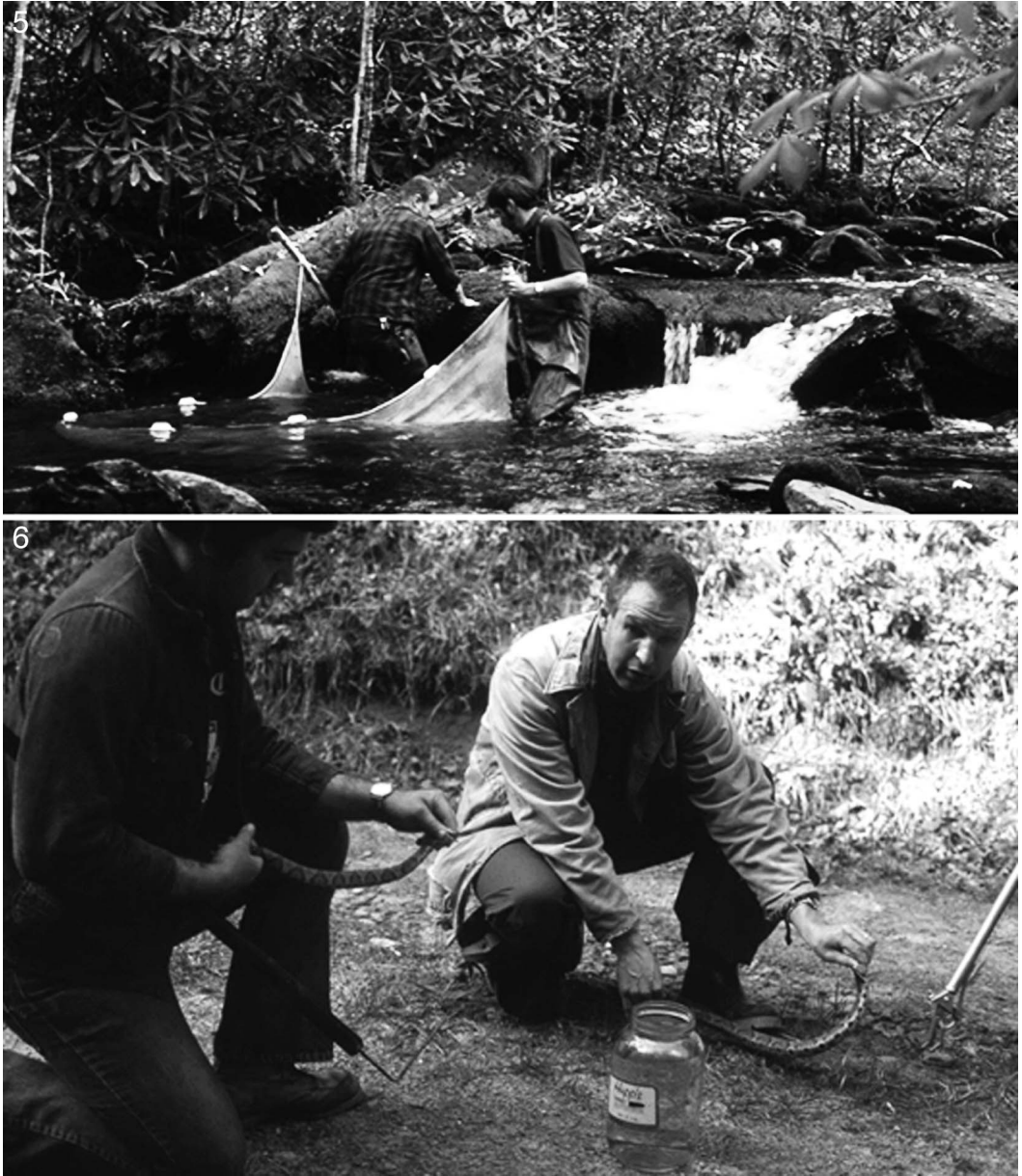
Figure 4.—Surveying for bats in a mine.

Research and Creativity award from ISU and the H.H.T. Jackson Award from the American Society of Mammalogists, both in 1991; was named a Distinguished Professor at ISU in 1999, and was conferred the Indiana Academy of Science Distinguished Scholar Award in 2011.

In addition to John’s incredible performance level in scientific research, publication, and teaching, he is also a popular speaker – on campus, within the community, statewide, and nationally, as he presents his vast knowledge of mammals in general, and bats in particular, to audiences from kindergarten through seniors (Fig. 8). He has given numerous talks to the American Society of Mammalogists and the Indiana Academy of Science. He is a most effective communicator in helping citizens understand the importance of science in our lives.

At least two other important organizations in Terre Haute owe a great deal to John Whitaker. For 20 years he served as president of Terre Haute Recyclers of Waste. During his tenure the objective was to build the operation until it could be sold to a private company. At the time of the sale THROW had about \$200,000 in the bank, which was donated to help the ISU recycling center get started. John currently serves on the board of Ouabache Land Conservancy, a land trust.

But it was not all work and no play. For about 20 years there was volleyball at the Whitaker house whatever the season. Unless it was raining at the scheduled starting time, the game was played Saturday and Sunday all year long, and Wednesdays during the summer. At times they had to shovel snow off the court. There were



Figures 5 & 6.—John at work! Figure 5 (top): Seining for fish. Figure 6 (bottom): Collecting snakes.

usually 4–10 people consisting of graduate students, faculty, wives, neighbors; anyone was welcome. The games allowed students and faculty to know each other as individuals and not just as student or faculty member. And as Dave Rubin, John’s first graduate student, says, “Most acquaintances don’t know John’s humorous side unless they get to know him well. On the outside, to most people, he seems very serious all the time.

Under the right circumstances, he can joke and kid with the best.”

John’s most impressive scientific productivity over several decades is a product, in part, of his enormous capacity for sustained work during long hours, as well as his goal for completing all tasks as efficiently and quickly as possible. John’s zeal for efficiency required several techniques to increase his work output, some innate, some learned.



Figure 7.—John working in the field with a bat detector.

Likely his greatest increase in work output stemmed from his lack of need to sleep in amounts typical for most adults. He frequently related that he usually did not go to bed on most nights until 11:00 PM or midnight, but then he typically would wake up sometime between 5:00 and 6:00 AM, whereupon he would arrive at his ISU office by 6:30, thereby increasing his usual work day by 2–4 hours daily. By such a schedule, and needing

only 4–5 hours' sleep daily, he accomplished 1½–2 days more work per week than most university faculty members.

Another habit that John perfected was to speed walk, with lengthy strides for a relatively short person, to decrease transit time. He also rarely wastes steps by walking a longer distance than is necessary to get where he is going. One day, when we were both new faculty at ISU, we were going to the Life Science departmental office to get our mail. I started to go around the corridor one way when John said, "Let's go around the rectangle the other way, it's shorter." When I looked at him quizzically, he said, "When I came here, I stepped off the distances both ways and it is three steps shorter this way." That little experiment saved him six steps per round trip to the mailbox, and likely saved him a few thousand miles of walking in his 50 years at ISU! Thus, I began to understand how he accomplished so much each year.

He was equally conscious about saving time, as saving distance. He always travelled light on field trips, placing only one change of clothes in a grocery bag for himself, thereby saving time packing and unpacking. Likewise he often signed his name as JOW, instead of John O. Whitaker,

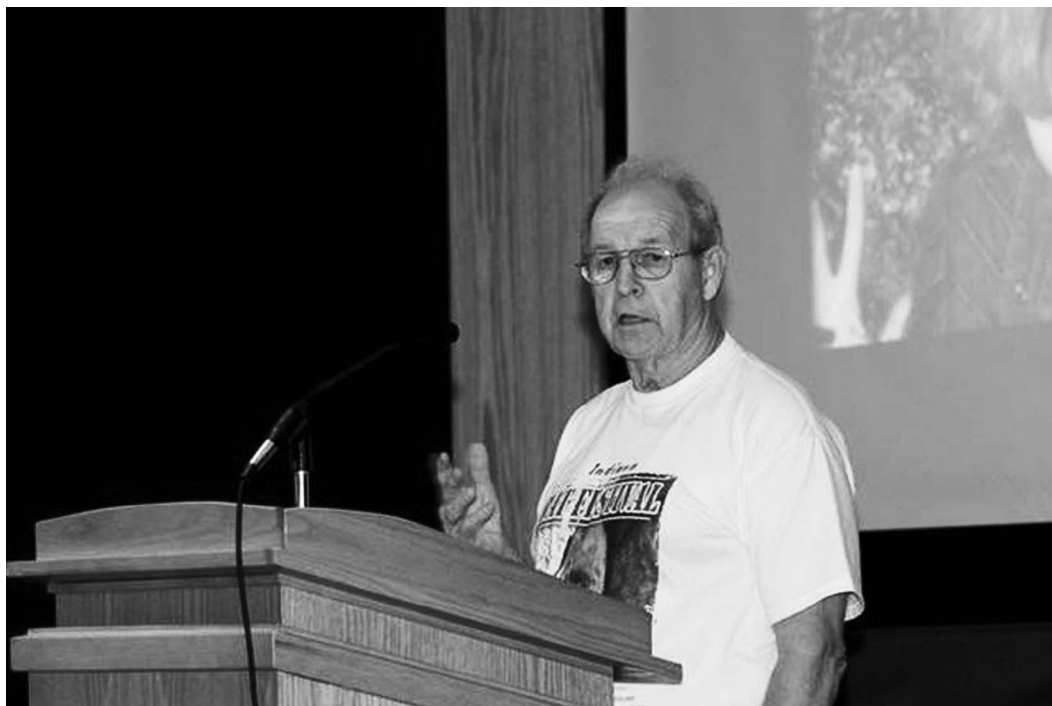


Figure 8.—John lecturing at the Bat Festival.

Jr., so much more time and space efficient! Never in my career have I encountered another person having JOW for initials. We all joked on field trips that someone shouting “JOW!” would put the fear of death into all surrounding small mammals in his vicinity, thereby increasing his efficiency at trapping!

In spring 1965, Dave Rubin, Earl Zimmerman, and John were headed out to collect salamanders in the mountains of North Carolina. About the time they left Murphy, John realized that they had no food with them except for a half a can of orange drink and one cookie. John suggested they go back and get supplies, as they were going to be in the mountains for two days. Dave and Earl looked at the map, found that there were a couple of hunting lodges along the way, and concluded that food would be available there. John said they could continue if they insisted, but if there was no food on the way he was going to proceed with the original plan to be gone for two days. When they arrived at their destination, nothing was open anywhere around. The three subsisted on their meager supplies.

Dave recalls that John’s sense of humor was as untiring as his physical and mental capabilities. Returning at the end of the trip, in spring 1965, they drove the ISU VW microbus (later known as the “JOW-mobile”) all night in driving rain to get back to Terre Haute. It was raining so hard that they were even finding cave salamanders (*Eurycea lucifuga*) among the herps on the road as they drove through Tennessee and Kentucky. They were so tired that all, including John, got “slap happy” and basically laughed the whole way home. Dave further notes that the trip was made because he and Earl were taking a Special Topics class from John in which they reviewed Richard Highton’s 1962 “Revision of North American salamanders of the genus *Plethodon*.” That class and that field trip led to his working, with John as advisor, on the *Plethodon jordani* complex for the first PhD out of the Life Sciences Department at ISU.

Stories like this helped establish that when on field trips, especially with his graduate students, John would not stop any more than absolutely necessary. That would enable more time for field observation, or collecting organisms, data, etc., hence greater field trip efficiency. One of the students, having heard this, always brought along plenty of snacks. Subsequently, they really didn’t need to stop much.

Besides trips associated with classes, as John describes in his teaching philosophy (below), his

graduate students often went out in the field with him outside of classes. Those experiences contributed much to their development as biologists and as future educators. Dave Rubin remembers many such experiences in addition to the North Carolina trip described above. Graduate students, would often go out with John and Dale Wallace in the mid-1960s as they conducted their survey of the fishes of Vigo County. On one of those trips, they were seining in one of the sloughs in the southern part of the county and were in the water almost up to their armpits, way above the top of their hip boots, trying to drag the net forward. They were a funny sight and the humor of it was not lost on them.

John, Earl (an undergraduate student at the time), and Dave went on several small mammal collecting trips together. Their first job every morning, before breakfast, was to check traps and then, while still fresh, to put up skins for anything that they caught overnight. One such trip was to Willow Slough in the sand prairie area of northwestern Indiana. On another such trip, to southwestern Indiana, they took a rowboat out on Hovey Lake in Posey County, where they came across a huge snapping turtle swimming in the shallow water. Dave jumped out of the boat, grabbed the turtle by the tail, and managed to lift it up to the boat as John tried to keep the boat steady. Upon getting it into the boat, they simultaneously asked each other, “OK, now what are we going to do with it?” The snapper very quickly got released back into the lake. At no time were all three men in the boat with the snapper!

John often wanted to trap small mammals on private land, which of course required permission from the owners. Not everyone understands the importance of scientific research, and a few refused to give access to their lands. One farmer told him that there was a bull in his field, even though it was a soybean field and clearly held no livestock. Another refused him access because the federal government wanted to put a wildlife refuge in the vicinity, and she planned to “be on the front lines with [her] Pappy” if the bulldozers came. She even complained to the department chair, saying that Whitaker was “misrepresenting the department” because “any fool knew that cats would immediately remove any mice from traps set outdoors.” Others just thought the idea of trapping mice was funny. One, sitting on his porch, simply bent his chair back, put his feet on the railing, and laughed and laughed, while John stood there. And a policeman, seeing John and

Dale Wallace approaching a stream to seine for fish on a rainy day, told them that was one of the funniest things he had seen – second only to the time he saw another fellow in a cornfield setting mouse traps, also on a rainy day. Of course, that “other fellow” was John Whitaker!

One of John’s early plots was located on a 1200 acre farm in northern Vigo County. John had permission from the owner to come and go as he pleased, as long as he let him know in advance. One Sunday morning, when John was on the property picking up his traps, he looked up and saw a tractor coming across the end of the corn field. John waved and noted that the driver did not wave back. As soon as he got to the corner of the field he immediately turned and came towards John. He jumped off the tractor before it was stopped, handed John a pencil and paper, and said, “No talk, I just want your name and address.” John tried to explain, but the driver cut him off and reiterated that he was not discussing it, he just wanted John’s name. He thought John was stealing corn left in the field. When John finally mentioned something about his brother giving permission, he calmed down and said next time John should ask *him*.

Another time John and several other Indiana mammalogists went to a cave in central Indiana where a couple of long-eared bats had been observed years earlier. Their five cars were parked one behind the other in a lane off the main road. The owner was away, but they had been in touch with a fellow who indicated he had gotten permission for them. What they didn’t know was that he had not been able to contact the owners, nor the person who watched the property while they were away. They visited the cave without finding the bats. As they came back over the hill they saw a very large man standing in front of the cars. It turned out that he was the person who took care of things while the owners were out of town. He said that three police cars would be arriving shortly to take them to jail. Luckily, Jim Cope, a faculty member from Earlham College, was a very good talker and averted this course of action. They wondered afterwards how interesting it might have been for all the mammalogists in Indiana to have been arrested and taken to jail.

And one final note on personal efficiency. Rarely, if ever, do you note John Whitaker shooting the breeze with students or colleagues. If John is talking with others, during working hours especially, he is talking science, and not engaged in superfluous gossip. I suspect all of us

field biologists could have accomplished far more during our careers had we adopted John’s efficient ways of conducting our work days during the last half century. For many years John has said that he hoped to continue his work until age 100. He is currently continuing to work on *Mammals of New York* and some 50 other projects.

MY TEACHING PHILOSOPHY

by John O. Whitaker, Jr.

My teaching philosophy is to have the students learn firsthand, in the field as much as possible, through observation, joint classes, small groups, and individual research projects, whereby students learn how to answer questions for themselves. Sometimes these projects have taken place with different classes over several years, e.g., on western chorus frogs (*Pseudacris triseriata*) and narrow-mouthed salamander (*Ambystoma texanum*). In Vertebrate Zoology, which I have taught for many years, we always took several field trips. In Mammalogy, we took a preliminary day-long session in which we learned how to trap and how to examine specimens and how to prepare skins and skulls. The second field trip was for four days for practice in the field of Mammalogy – i.e., we prepared skins, took notes, and studied reproduction, food, and parasites. In Herpetology, the emphasis of the entire course was on research, culminating in a five-day field trip to North Carolina, essentially the capital of the world distribution for salamanders. I taught many summer classes entirely in the field – 10 years at a field campus in southern Pennsylvania, 10 years at the ISU field campus in Brazil, Indiana, and 10 years at Kieweg Woods, the biological field campus at West Terre Haute. For many years I took a group mostly of graduate students to the annual meeting of the American Society of Mammalogists. Most years this was combined with extra days to learn about the mammals of these areas.

As for classroom teaching, my main method was to ask questions and then to help the students to come up with the answers themselves by providing data. Many of these sessions were on taxonomy and nomenclature, evolution including isolating mechanisms, subspeciation, speciation, and a number of ecological topics.

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Dave Rubin adds, “John’s own description of his teaching philosophy is spot on. He challenged students with questions, and then helped them

answer the questions for themselves. He made them think. He was selfless in the time and effort he gave to helping his students, yet never claimed any credit for the work of his students even when he had contributed significantly. Perhaps the most important thing John did for me, starting early in my time as a graduate student at ISU (1963–69), was to ask me to go over papers he had written before he submitted them. And he gave me credit in print for doing so. He also asked me to help with the herp keys as he was writing his *Keys to the Vertebrates of the Eastern U.S.* His trust in me gave me confidence, and the opportunity to review his submissions honed my skills at writing and editing, skills which served me very well in my future careers.”

A professor named Whitaker, John O.
Does research by collecting bat guano.

Rare bats are his quest

He's proved that not one is a pest

Without doubt, John O. is pro bono.

—A whimsical limerick by Marion T.
Jackson

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