

INTRODUCTION OF DALE CLAYTON AS THE HENRY BALDWIN WARD MEDALIST FOR 2008

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Fellow parasitologists, it is my distinct pleasure to introduce Dr. Dale H. Clayton of the University of Utah as the 2008 Henry Baldwin Ward Medalist for the American Society of Parasitologists. Dale Clayton is the quintessential modern parasitologist. His varied research projects are rooted in traditional parasite systematics but run the gamut from alpha-taxonomy to evolutionary, ecological, and behavioral associations between hosts and parasites, and state of the art molecular phylogenetic analyses. Furthermore, one of his recent applied studies received mass media attention throughout the world after he and his colleagues developed a new device to kill head lice and their eggs on humans. Throughout his studies, he has been amply supported by numerous grant awards, especially by recent significant awards from NSF, and he has engaged many students, ranging from high school to postdoctoral levels, in various research projects.

Dale's research principally involves the chewing lice associated with birds—often referred to as “bird lice.” Early in his career (1980–1983), he and Dr. Roger Price, the world's foremost authority on the taxonomy of chewing lice, became close associates at the University of Minnesota, where Dale was studying for his master's degree in entomology, and Roger was a tenured professor. Dale learned the taxonomic ropes from Roger and has never looked back, having published a succession of systematic manuscripts on chewing lice, many of them coauthored with Roger who is now retired but still actively publishing. To date, Dale has described or codescribed 2 genera and 59 species of lice. Perhaps the most grandiose, and certainly the most widely used, collaborative product between these two authors, as well as 3 additional coauthors, has been *The Chewing Lice: World Checklist and Biological Overview*, which was published in 2003. This 501-page book has received wide acclaim from ectoparasite, bird, and mammal researchers throughout the world. When I have a question about chewing lice, this is the first source I consult, a situation that is no doubt repeated globally every day.

After graduating from the University of Minnesota in 1983, Dale relocated to Chicago where he embarked on a Ph.D. program and widened his studies to include evolutionary, ecological, and behavioral interactions between birds and their lice. He worked with a veritable “think-tank” of evolutionary ecologists in Chicago and formulated many testable hypotheses, particularly regarding the effects of host grooming and morphological attributes, on the ecology, evolution, and morphology of bird lice. It was during this time period (1988) that I first met Dale when he visited the Smithsonian Institution where I was curating fleas and sucking lice. I had previously corresponded with him, but, upon meeting him, I was immediately impressed at the breadth of his knowledge and his novel approaches and ideas about host–parasite interactions. It was then that I realized that this individual would lead the study of bird ectoparasites into the 21st century.

Dale was awarded a prestigious NSF–NATO postdoctoral fellowship when he completed his Ph.D. in 1989. From Chicago, he uprooted and crossed the Atlantic to further his career at Oxford University in the Department of Zoology. Thus, he was in another, but somewhat different, “think-tank” of biologists. The result was unbridled new ideas and publications on a variety of parasitological topics but still based on lice parasitizing birds. Dale expanded into new areas, forged new collaborations, acquired significant grant support, and, I am told, he was popular on the U.K. lecture circuit. Two years into his life at Oxford, Dale was promoted to lecturer status (1991–1996).

As much as Dale apparently relished his experiences at Oxford, he was lured back to the United States to accept a position as Assistant Professor of Biology at the University of Utah in 1996. Dale has been remarkably productive in Utah with continuous major grant support, and rapid succession through the ranks to associate professor in 1999 and professor in 2004. He has developed a highly respected, bustling laboratory, replete with excellent students, collaborative researchers, and innovative research ideas. He has also developed the Price Institute for Phthirapteran Research (PIPeR) in honor of his long-term mentor. As a side note, whenever I meet a student or faculty member from Dale's department, I typically ask if the individual knows Dale. Without exception, the response is immediate enthusiasm and praise; one Ph.D. student (not from Dale's laboratory) remarked that departmental seminars by Dale or his students were always well attended because new and exciting ideas and research were sure to be presented.

To date, Dale's research has been funded by more than 50 grants ranging from small to grandiose with more than \$2.5 million in total support. Recently, with colleagues from the University of Kansas, he was awarded a 5-yr BSI–NSF grant to survey parasites of vertebrates in the Philippines. Dale has authored or coauthored 2 books, 7 book chapters, more than 100 peer-reviewed papers and 5 book reviews or letters to editors. One sponsor pointed out that Dale has averaged 3.5 funded grants and 7.2 published papers per year since becoming an assistant professor. Furthermore, Dale has mentored an astonishing number of students, including 4 postdoctoral associates, 13 graduate students, 27 undergraduate research associates, and 5 high school research associates. Many of these students or associates have progressed to important positions in biology or medicine, including all 4 of his postdoctoral researchers: Dr. Andrew Bennett, currently a Lecturer at the University of Bristol, U.K.; Dr. Kevin Johnson, currently an Associate Research Scientist at the Illinois Natural History Survey; Dr. David Reed, currently Assistant Curator of Mammals at the Florida Museum of Natural History, University of Florida; and Sarah Huber, currently an Assistant Professor at Randolph Macon College in Virginia. Both Kevin Johnson and David Reed have continued with the research that Dale fostered in them and are funded by

separate NSF grants to tackle significant research projects involving lice. Similarly, Dr. Sarah Bush, a former Ph.D. student from Dale's laboratory, is now funded by NSF to undertake parasite biodiversity inventories in China and the Philippines.

One of Dale's former students stated, "The years in Dale's laboratory were the most productive and inspiring of my career. Dale's enthusiasm for lice was infectious. Working with Dale, I gained the final confidence and skills needed to become a successful researcher. His hard-working ethic and boundless interest in a variety of topics led to a very productive environment in which to work."

Another of Dale's sponsors wrote, "The experiments currently conducted in his laboratory involving parasites of columbiform birds, are among the most creative and elegant ones in all of parasitological history. They can be characterized not only by their creativity and elegance but also by their audacity. His work of the past 5 years is a truly remarkable demonstration of what can be done to sort through the factors that actually allow survival of a parasite in/on a host, the host-parasite interactions that function most in selection and adaptation, and the mechanisms by which parasite taxa diversify evolutionarily along with their host taxa."

Dale is much more than a laboratory biologist. He has completed fieldwork in at least 18 countries and has delivered more than 60 invited seminars or other talks in various parts of the world including the United States, Argentina, Australia, Austria, Canada, China, England, France, Malaysia, Mexico, Scotland, and Switzerland. With respect to teaching, he regularly gives a course in Ornithology at the University of Utah and also often teaches Ecology and Evolution, Advanced Field Ornithology, Organismal Diversity: Form and Function, and various graduate-level seminar classes. Service-wise, he is a frequent reviewer of manuscripts on bird lice and parasite ecology and evolution. He is also the current secretary for the Society for the Study of Evolution and has had numerous service roles at the University of Utah. Of direct relevance to this society, he and Sarah Bush co-organized a Special Symposium on Evolutionary Ecology for the present (2008) ASP Annual Meeting.

As one of Dale's sponsors pointed out, "One of the real strengths of Dale's work for the discipline of parasitology is its visibility. Dale has been, and continues to be, a tremendous

ambassador for our discipline. Not only are his scientific contributions published in the highest quality journals, but he frames much of his work in a context that is often interesting to, and picked up by, the popular press. His work and name have appeared in outlets all over the world (e.g., *New York Times*, *USA Today*, *Washington Post*, *Los Angeles Times*, *Japan Times*, *Discover Magazine*, *Science News*, and *Science*) and have been covered by hundreds of television and radio broadcasts."

I will close with 2 examples of the wide-ranging influence of Dale's work. First, in 2006 Dale and his colleagues patented an effective device for killing head lice and their eggs on humans. Stories on this device were picked up by news groups around the world and widely posted in print or on the Internet. Without giving away too many secrets, I can tell you that this device is a lot of hot air—but in a good way!

In my opinion, no introduction of Dale Clayton would be complete without referring back to some events in 1989 when Dale was completing his Ph.D. at the University of Chicago. A popular cartoonist of the time was Gary Larson, and Dale decided to name a new species of owl louse after Mr. Larson. To be sure that Mr. Larson was aware of Dale's noble intentions, Dale sent a letter to Gary Larson outlining his intent and stressing that this was a way to honor Larson; Dale also included an image of the new species of louse. Gary Larson was apparently very impressed because he included a copy of Dale's letter in his next book, *The Prehistory of the Far Side*. He also decorated the inside covers of his book with regimental rows of *Strigiphilus garylsoni* and reproduced Dale's image of the new species. This must have been an exciting time for both Dale Clayton and Gary Larson, but, interestingly, the book was published before Dale's description of the louse so, technically, the book has taxonomic chronological precedence. The result of this sequence of events is that *The Prehistory of the Far Side* must be cited, along with Dale's descriptive paper, in any technical manuscript that discusses the taxonomy of *Strigiphilus garylsoni*. Therefore, through Dale's actions, no library or database of Phthiraptera is truly complete unless it includes *The Prehistory of the Far Side*.

Fellow parasitologists, I present Dr. Dale Clayton, this year's deserving recipient of the Henry Baldwin Ward Medal.

ACCEPTANCE OF THE 2008 HENRY BALDWIN WARD MEDAL: BALANCING THE TRIPOD

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President Nadler, Chairman Durden, Dr. O'Brien, ASP members, colleagues, and friends, it is a great honor to be this year's recipient of the Ward Medal. I am flattered and humbled to receive this award, following in the footsteps of other winners whose work I truly admire. I am particularly honored, and a little embarrassed, in light of my poor participation in ASP activities over some 18 years of my membership. At least I can claim to be a regular contributor to the *Journal of Parasitology*. I recently read in a newsletter that Dan Brooks remains the youngest ever recipient of the Ward Medal. I represent the other end of the spectrum. I was born in 1957 before the award was even established, making me one of the oldest, if not *the* oldest recipient, to date. This makes it an even greater honor for me. As they say, better late than never!

It is also gratifying to be only the third arthropod ectoparasitologist to receive this honor, along with Lance Durden and Harry Hoogstraal, both giants in our subfield. We ectoparasitologists sometimes feel as though we're on the outside looking in (pun intended). For example, I was recently discussing the NSF's Ecology of Infectious Diseases program with an NSF program officer at a meeting. I described one of our projects concerning a particularly nasty ectoparasite, and the program officer's response was a blank stare, followed by the assertion that ectoparasites are not disease-producing organisms. To his credit, he quickly reversed himself and noted that they *are* parasites, and some of them vector pathogens that cause disease. But his initial response was typical of a widespread bias many people seem to have regarding ectoparasites. Thankfully, this bias appears to be slowly dissipating over the years.

I have entitled this account "Balancing the Tripod" because I believe strongly in a brand of parasitology that strikes a balance among parasite biology, host biology, and evolutionary theory, but more on this later. As in past accounts by Ward Medalists, I will attempt to describe the particular road I have taken professionally. The style is in keeping with a core graduate seminar we teach at the University of Utah called Faculty Research Forum. One goal of the seminar is to poke holes in the perennial student illusion that senior researchers are pre-packaged grant- and paper-writing machines who are smarter or more capable than they are. This is usually false, and it's definitely false in my case. With apologies to Rudyard Kipling, if you follow your passion, if you can weather funding cycles and the rejection of your best papers, if you have a bit of luck, and perhaps a few good mentors thrown in, then it is entirely possible to make it in this business. And what a terrific business it is! Although the phrase is hackneyed, I honestly do feel like I get paid to pursue my hobby most days.

I was born in Corpus Christi, Texas, where my dad was stationed in the Marine Corps. He retired from active duty around my second birthday, and we moved to Wilson, North Carolina, not far from where my parents grew up. I was full of energy as a child. I'm told I didn't sleep much, even when I was a baby. I have a vivid memory of standing at my bedroom window when I was 4 or 5, nose pressed to the glass, trying to

convince myself I could see the sun coming up. If morning had arrived, I could get up and do things! As usual, my mother intervened and pointed out in no uncertain terms that it was 3 A.M. and I should get back in bed.

I was hyperactive and talkative as a kid (traits I still possess). My second grade teacher once found it necessary to tape my mouth shut during a class in order to teach me a lesson. I remember the humiliation of sitting in front of the class with my mouth covered in Scotch tape. To this day, I am still searching for a particularly nasty species of parasite to name after that teacher. But the sweetest revenge, I suppose, is the fact that the lesson had no effect whatsoever on my talkativeness.

Like many biologists, my parents indulged my early interest in natural history, particularly after we moved to northern Virginia when I was 8 years old. By age 11, I was heavily into the sport of falconry. In addition to letting me fill our freezer with all manner of road-killed "hawk food," my long-suffering parents agreed to let me subdivide our laundry room with a wooden wall to create an indoor "mews" for my hawks and falcons. They let me fill the mews about a foot deep with sand to absorb the birds' feces. I've never had the guts to ask my mother how many pounds of sand she must have vacuumed out of our carpets during those years. Fortunately, my parents' devotion was blind as a bat, and I remain very grateful to them for indulging and nurturing my early passions and ridiculous pursuits.

My gradual defection from birds to parasites began during my final year of high school when I was taking an advanced biology class with an independent project as a requirement. I attended Langley High School, just down the road from the CIA. My biology teacher, Mr. David Buchanan, was supportive of my desire to find something original to do. I do not understand why I felt a need to do original work at this age. But I spent a significant amount of time trying to think of novel scientific questions I might be able to address. I had a distinct hunger for such questions, and I sat at our kitchen table staring at the woods across the street trying, yet failing, to think of novel questions. At the time it seemed like they had all been answered!

In addition to strong interests in birds and other vertebrates, I nurtured a modest interest in insects, and I had made a small insect collection. I also had a bird-banding permit and, while processing an American kestrel (*Falco sparverius*) one day, I noticed some tiny creatures moving through the feathers of its head. I managed to collect several of these critters, and I wanted to find out what they were. I had learned of the existence of the Beltsville (MD) Agricultural Research Center, or BARC, just a short drive around the D.C. Beltway from my school. I visited BARC to use the library and, while there, chatted with a staff member who recommended that I contact Dr. K. C. Emerson, a noted authority on lice and other ectoparasites, who happened to live in northern Virginia. As it turns out, Dr. Emerson worked in the Pentagon, and he had a rather impressive job. He was Deputy for Science and Technology to the Assis-



FIGURE 1. Doing fieldwork in 2006 near Kuan Kuoshui Nature Reserve, Guizhou Province, China.

tant Secretary of the Army, meaning that he was essentially in charge of all research done by the army. More relevant to my interests, however, was the fact that he was also an adjunct curator at the Smithsonian's National Museum of Natural History, where he curated a sizeable collection of ectoparasites.

I obtained Dr. Emerson's phone number, summoned my courage, and called him up. Rather than the formal, stuffy character I anticipated, "K.C." turned out to be a soft-spoken man who had survived both the Bataan death march and nearly 4 years in a Japanese POW camp during World War II. He invited me to his house, where he taught me the basics of collecting lice and supplied me with glass vials. He emphasized the critical importance of labeling each vial with at least 4 pieces of information: host identification, collecting locality, date, and collector. He gave me a copy of the North American checklist of chewing lice he had recently published, but I didn't understand enough about taxonomic classification to make use of it until years later. K.C. readily agreed to show me how to make slide mounts of lice and to help me identify any lice I collected for my school project. At the time I worried I was intruding on his time. But I now realize that he must have been excited to have a high school student with an interest in lice call him up. Not exactly an everyday occurrence!

The goal of my project was to collect and identify lice from raptors, and to compare the number of lice from each individual bird to that bird's general condition (body mass). I wanted to try and determine whether the lice had any effect on the host. I found this question to be fascinating, partly because the con-

ventional wisdom was that lice are so closely tied to the host that they will not harm it. I completed my school project and entered it in the regional science fair, where it won first place in medicine. Years later, part of my Ph.D. work addressed the same basic question, but in a broader co-evolutionary context, using a different bird-lice system. Lice are, in fact, detrimental to the host, but the effects are most often chronic and difficult to measure.

Although I had strong interests and considerable enthusiasm in high school, I lacked the discipline to excel academically in courses I found boring. My high school average was a disappointing B-, so I worried that I would not be competitive for colleges or universities. Around this time a high school guidance counselor suggested to my mother that Hartwick College, a small liberal arts institution in Oneonta, New York, might be a good fit. I included Hartwick in my college applications and was delighted when they offered me not only admission, but an academic merit scholarship. The decision to attend Hartwick was an easy one, and I enrolled in 1975.

I was mentored there by an attentive professor, Dr. J. Robert Miller. Although trained as an organic chemist, "Doc," as we called him, was a bird watcher who had fallen under the spell of community ecology. This was partly the result of discussions over the years with his brother-in-law, the famous ecologist Robert MacArthur. Doc took an interest in me and, with a combination of strong encouragement and stern criticism, helped turn me into something of a scholar. The process was humiliating and painful at first, and during my freshman year I struggled and nearly lost my scholarship. I spent many hours talking to Doc, both on campus and at his home. I took 5 bird-related courses under his guidance, ranging from field courses in New York, the western United States, and the Bahamas to independent research projects. Over time I improved academically and ended up doing well at Hartwick, winning awards in both my major (biology) and minor (psychology). I needed the small school environment Hartwick provided; my experience there is a great example of the important role small colleges can play in higher education.

By my senior year, I was sure I wanted to attend grad school and had collected a good deal of information about different graduate programs in avian biology around the country. I was leaning hard toward graduate work on the behavior of colonial water birds, the topic of my senior thesis. In the end, however, it was the unlikely combination of K. C. Emerson and John Janovy, Jr., who renewed my interest in parasites. Although I had not communicated with K.C. since high school, he contacted me and explained that Dr. Roger Price at the University of Minnesota had a graduate research assistant position he was looking to fill. K.C. was sure I would be a perfect candidate. He considered Roger to be the finest taxonomist in the world working on lice, and he was determined that I would end up being one of Roger's students. Once I learned the biology of lice, he reasoned, I could put it together with the knowledge of birds I had already acquired and do important things. To use my analogy, I would have two legs of the tripod.

Where K.C. provided contacts and opportunities, it was John Janovy's newly published book *Keith County Journal* that renewed my excitement for parasites. I found this book to be utterly mesmerizing, partly because it elevated parasites to the same level of "cool" that birds seemed to enjoy (try getting a

date as a mere chewing lice geek). I was so taken with *Keith County Journal* that I went around reciting portions of it to anyone who would listen. If you have not read Janovy's masterpiece, I strongly encourage you to do so!

I took K.C.'s advice and wrote to Roger Price with a list of diverse questions. But his response caught me off guard. Although Roger said he would certainly be willing to give me a try, he was concerned that my interests were too diffuse to allow me to spend the many hours at the microscope required for the painstaking work of a taxonomist. I assured him I did not think this would be a problem. By then, I was determined to attend the University of Minnesota, partly to study with Roger, and partly because I had discovered that Minnesota's Bell Museum of Natural History had one of the best groups of avian biologists in the country. There, I reasoned, I could learn about parasitic insects while continuing to learn about their avian hosts. At that time, I had no notion of a tripod with 3 legs. My focus was entirely on the organisms, with no real concern for general concepts.

Around that time K. C. Emerson provided another important opportunity. After I finished college he arranged for me to have a summer job working with him at the Smithsonian as a technician. The salary—about \$200 a week—seemed like a fortune to me at the time. While working that summer at the Smithsonian I interacted with several curators, including Charles Handley, Jr., a mammalogist with a long-term project netting and marking bats on the Smithsonian Tropical Research Institute's Barro Colorado Island in Panama. Dr. Handley invited me to join him in Panama for several weeks to assist in the field. I jumped at the chance because bats had long fascinated me. I delayed my start at Minnesota by one semester in order to spend the autumn of 1979 in Panama. This was an incredible experience and one that got me hooked on the tropics. After I got home, my dad had a tongue-in-cheek business card printed up that read: "Dale Clayton, Consultant—Bats, Birds and Bugs." He gave me a box of them as a Christmas present; I was delighted!

Immediately after Christmas, I packed all of my belongings into my Volkswagen and drove to Minnesota. The start of my graduate career coincided with the start of the 1980s. It was a sobering experience, moving from a tiny college environment to the second largest university in the country. But the entomology coursework required at Minnesota provided a good foundation in insect biology. And, outside the coursework, Roger Price was unusually indulgent in letting me pursue whatever interested me, despite the fact that I was on a full-time research assistantship. We chatted nearly every day about a whole range of topics. Roger seemed to think I had a very good memory, but I didn't think so. These days I realize I did indeed have a good memory, and one that was head and shoulders above what I am capable of now!

While at Minnesota I learned a lot about ecology, behavior, and evolution, and I beefed up my knowledge of general biology by reading and rereading Keeton's wonderful biology text (Hartwick had not had a general biology course). I also began running experiments with captive birds, mainly pigeons, to test various ideas about how birds defend themselves against lice and the effects that lice might be having on birds. In those days there were no IACUC regulations, making it much easier to run spur-of-the-moment experiments with captive animals. The

more stringent regulations on the use of animals in research today put a damper on spontaneous creativity. Unfortunately, students are the ones who suffer the most from this state of affairs.

During my third year at Minnesota, I finally buckled down and focused on my thesis project. In a few short months I blew through a substantial revision of one of the larger species groups of the owl louse genus *Strigiphilus*. Roger seemed to be impressed, partly because I think he had decided by then that I was not, in fact, capable of putting in the hours required for good taxonomic work. When my revision was published, K. C. Emerson wrote to congratulate me on the paper and express his hope that I had found my time with Roger Price rewarding. Indeed, I had. In addition to learning about louse taxonomy, which forms the basis of my work to this day, Roger gave me a gift that few students ever receive. He allowed me the freedom to pursue my interests without constraint. I am deeply grateful to him for this gift. Over the years he and I have co-authored more than two dozen publications, the highlight being *The Chewing Lice: World Checklist and Biological Overview*, which we published in 2003 with Ron Hellenthal, Ricardo Palma, and Kevin Johnson. Roger has been of such importance to me, both personally and professionally, that I named my eldest son, "little" Roger, after him. "Big" Roger and his wife Arlene remain among my closest friends.

While I was a grad student at Minnesota, I had the audacity to write a letter to the famous evolutionary biologist Ernst Mayr at Harvard, pointing out a couple of minor errors in a review article he had just published in *Science*. To my surprise, he wrote back. The letter pulled no punches and including the following gem: "You ask me to tell you whether you are 'somehow making a mistake?' Yes, you are. Nothing has hurt the prestige of systematics among the biological sciences more than the pendency and nitpicking perpetrated by the lesser lights among the taxonomists. Try, in the future, to focus on important questions, on questions that are of interest also to non-taxonomists."

Mayr's letter angered me at first. But within a few weeks it dawned on me that he might be right. While teaching an adult education course on evolution for extra money, I had come to understand that the ability to think about abstract concepts is what set Darwin and other great biologists apart. They did not rely solely on a knowledge of the natural history and systematics of their pet groups. Just as theory divorced from natural history has real shortcomings, so too does a knowledge of natural history without a broader context in which to interpret this information. I came to realize that knowledge of both host and parasite biology might not be enough. Perhaps I could do better work if I also learned some evolutionary theory. In effect, I needed the third leg of a tripod.

At my Master's defense, my committee pointed out that I could get a Ph.D. with just two more years of work. But I was already determined to study evolution for my Ph.D. I had applied to several of the top ecology and evolution programs and was admitted with fellowships to all of them. I chose to attend the University of Chicago, partly because it was the top-ranked grad program in evolution, and partly because it was the only program in my application pool with a major museum down the road, the Field Museum of Natural History.

I started my Ph.D. program in 1983 in the Committee on

Evolutionary Biology, a degree-granting “hybrid” at the interface of several departments and institutions. I was co-advised by Douglas Schemske, a brilliant young evolutionary ecologist at the University of Chicago, and John Fitzpatrick, a renowned young ornithologist at the Field Museum. I had a foot in each camp, with offices on the U of C campus and at the museum. The intense program at Chicago was “sink or swim.” I had little daily contact with my advisors, but the contact I did have was of high quality. In my first year Fitzpatrick invited me along on a museum collecting expedition to Peru, where I developed methods for quantifying ectoparasites of birds in the field. During that expedition I quantified hundreds of populations of lice from dozens of species of freshly collected birds. These collections formed the basis of more than a dozen publications in taxonomy and ecology in subsequent years.

My actual Ph.D. thesis work focused on a decidedly less exotic community: rock pigeons (*Columba livia*) and their lice in northern Illinois. At Doug Schemske’s urging, I revisited this system, which I had toyed with in Minnesota. I did an in-depth experimental study of reciprocal selective effects between pigeons and lice, with both captive and field components. The captive portion of the study involved a large breeding flock of wild caught pigeons I had “inherited” from a University of Illinois student named Dale Droge. This was a lucky acquisition as there were no suitable animal facilities at the University of Chicago for the kind of work I wanted to do. The only problem was that the breeding flock was in Urbana, 140 miles away from Chicago. I ended up spending much of my time as a Ph.D. student working between Chicago and Urbana. For field sites I used breeding populations of pigeons beneath bridges over agricultural streams along Interstate 57 between Chicago and Urbana. This approach was efficient and worked pretty well.

In 1987, while still at the University of Chicago, I married Kristin Erickson, who was a grad student in sociology, then a law student. Life with an attorney had some interesting moments, such as a cocktail party at the blue chip firm where she ended up working in downtown Chicago. At that event another attorney decided to challenge why someone as seemingly intelligent as me would waste his time studying flying rats, to say nothing of the lice that live on them. In response, I asked how a seemingly intelligent guy like him could sleep at night raking in hundreds of dollars an hour while the majority of our species suffer from crushing poverty. To my astonishment, instead of punching me in the face, he reversed engines and became really interested in what I was doing. Every time I saw this guy on future occasions he would ask how the work was going. Fortunately, Kristin didn’t much care for the law firm scene so she was not too offended by my shenanigans. Kristin and I have two wonderful children: Roger, born in 1990, and Miriam, born in 1993. Sadly, our marriage ended in 2003, but we remain close friends and co-parents to our kids.

During the final year of my Ph.D. work, I was fortunate to receive an NSF-NATO postdoctoral fellowship to the Department of Zoology at Oxford University in England. At the time Oxford had a dynamic group of researchers working on host-parasite ecology, evolution, and behavior. These included W. D. Hamilton and Robert May, among others. Since I had my own fellowship, I could do pretty much whatever I liked. But the fellowship was for just one year, 1990, meaning I was under the gun to find another source of funding fast, particularly with

a spouse and newborn child in tow. Those were stressful months. But I loved Oxford and wanted to stay longer.

Nine months into that year, I was fortunate to obtain a fixed-term (6-year) departmental lectureship. It was much like a non-tenure-track assistant professorship, but with a rock-bottom salary. I think the main reason I got the job is that while I was being interviewed by the search committee, when questioned as to how I felt about the miserable salary, I feigned delight and blurted out “It comes with a salary!?” Moral of the story: enthusiasm can get you places, as long as it’s genuine.

The new position at Oxford was terrific because it allowed me to apply for grants and have my own grad students and postdocs. I spent nearly 5 years in that position and supervised three excellent Ph.D. students: Patricia Lee, Daniel Tompkins, and Bruno Walther. I was fairly involved in their projects, which ranged from comparative analyses of Peruvian birds and their lice to a project integrating co-phylogenetics and experimental ecology using Malaysian cave swiftlets and their lice. The swiftlet project was a wonderful excuse to do field work on birds and lice throughout Australasia.

Another project at Oxford, in collaboration with my close friend Janice Moore, was the publication of an edited volume called *Host Parasite Evolution: General Principles and Avian Models*. This volume originated in a symposium we organized in 1994, with financial backing from ASP, for the International Ornithological Congress in Vienna, Austria. By the time the volume was complete, it had expanded considerably to include quite a few chapters and authors not represented in the symposium. The overriding purpose of this volume, which was published by Oxford University Press, was to integrate general concepts relevant to host-parasite biology with an overview of the incredible diversity of avian parasites. The volume was successful and has been used by many people, which is gratifying.

While at Oxford, I applied each year for a few interesting faculty positions back in the states. But I couldn’t manage to get an interview. By my fourth year, I was starting to worry that I might not be able to get a tenure-track position, either because of the prohibitive cost of flying me back from England, or because I simply wasn’t good enough, or both. So in the cover letter with my applications that year I included a footnote stipulating exactly how much a round trip ticket from Oxford cost and pointing out that it was no more expensive than many domestic tickets. Although it was probably a coincidence, I got two interviews that year—one for a curatorial position back at the Field Museum, and the other for an evolutionary ecology position at the University of Utah. I landed the position at Utah, which was exciting because they offered me terrific space, including animal facilities, and a generous startup package. I delayed beginning the position for a year so I could finish up projects and my students at Oxford. We moved to Salt Lake City in 1996. It was a dramatic shift in culture, climate, and topography. But it was a wonderful place and a wise move.

The biology department at the University of Utah is outstanding, the teaching loads are reasonable, and the facilities and other resources are excellent. I am lucky to be employed here. Over the past 12 years I have had the privilege of advising 10 more graduate students, including Ph.D. students Sarah Bush, Chris Harbison, Jennifer Koop, Jael Malenke, Brett Moyer, Wendy Smith, and Jessica Waite and M.S. students Richard Adams, Brad Goates, and Dukgun Kim. It is these talented in-

dividuals, together with a small army of undergrad research associates, and several postdocs, who accomplish the real work in the lab. Many of their thesis projects have formed important components of work at the interface of experimental ecology and comparative phylogenetics of “wing” and “body” lice and their shared Columbiform hosts (pigeons and doves). Although space does not allow an in depth discussion of this work here, summaries and relevant publications can be found on our lab web site: darwin.biology.utah.edu.

My work in Utah has benefited immeasurably from a decade of collaboration with my second wife, Dr. Sarah Bush, whom I met at the University of Utah. Sarah is a gifted parasitologist who has interacted in recent years with many ASP members, providing specimens of ecto- and endoparasites she has collected during field work in Australia, Papua New Guinea, China, and the Philippines. Sarah is one of the calmest people I know, which is a good complement to my manic personality. The work we do together is better than the work I did alone, and the productivity of the entire lab is enhanced by her efforts. Our latest “project” is a pair of energetic twins born in June of this year, a boy named Austin and a girl named Sonora. We will undoubtedly be packing them off to some remote field site once they reach an appropriate age.

I have had the good fortune of going on collecting trips in many interesting countries over the years. One of the most rewarding was part of a sabbatical in 2002 that I spent in the

highlands of Papua New Guinea, together with my son Roger, then 12, and my daughter Miriam, then 9. Although it was a risky endeavor to take the kids to such a remote location, the trip was a success and the rewards priceless. The kids were exposed to things few other American kids have seen. They participated in an expedition to a rainforest cave to collect specimens of the little known Papuan swiftlet (*Aerodramus papuensis*) and its lice, which proved to be a new species. Each of the kids was so insistent that this species be named after them that my coauthors and I were forced to give it the unwieldy binomial *Dennyus mimirogerorum*. We will end up burning in some kind of nomenclatorial hell for this transgression, I feel sure.

I will end this rambling account with a quote from one of my favorite characters, Ferris Bueller. In the film *Ferris Bueller's Day Off*, he repeatedly admonishes us that “Life moves pretty fast. If you don't stop and look around once in a while, you could miss it.” As parasitologists, we can do far more than “look around.” We are in a position to observe, dissect, probe, compare, and experiment with some of the most fascinating life forms on earth. We are among the luckiest people on the planet, and, as a consequence, we have an obligation to do the best work possible. For me, such work is most easily achieved when balancing the tripod of parasite biology, host biology, and evolutionary theory.

Thank you again for this amazing honor. I am most grateful!