

## WOMEN IN MAMMALOLOGY (1940–1994): PERSONAL PERSPECTIVES

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We present autobiographical accounts of four women mammalogists whose careers collectively span the period of 1940–1994. All are long-term members of The American Society of Mammalogists and are actively involved in education and mammalogical research. In addition to discussing our interactions within the ASM, we discuss important influences in our early decisions to pursue a scientific career, the consequences of such decisions, and our subsequent career and family path.

**Key words:** women, history, mammalogy, science

We, the authors of the following personal accounts, were selected to relate our experiences as mammalogists with the supposition that we are representative of women who joined the ASM between the 1940s and 1970s. Because we are uncertain that our experiences typify those in our respective cohorts, we prefer to view ourselves as representatives of a time when women's roles were more narrowly defined than at present. Among the four of us are several "firsts" for ASM: the first woman (who is not a spouse of a mammalogist) to have an award named after her (Horner; Fig. 1); the first to become an Associate Editor of the *Journal of Mammalogy* and President of the Society (Taylor; Fig. 2); the first to serve the ASM as a Managing Editor of one of its publications (Linzey; Fig. 3); the first to be named a winner of the C. Hart Merriam Award (Michener; Fig. 4). All of these "firsts" have occurred in the past 14 years.

These accounts reveal both similarities and differences among us, confirming that individual experiences of women in science are varied. To different degrees, we all experienced childhoods that included exposure to the natural world. The importance of supportive parents, role models, and mentors is clearly expressed. We all are

characterized by a desire for adventure, as evidenced by our research in parts of the world initially unfamiliar to us. The differences that divide us relate primarily to the interface between personal and professional lives. For example, two of us entered permanent positions shortly after graduate school; of these two, one never married (Horner) and the other did so after her career was well established (Taylor). The other two (Linzey, Michener) married while still in school (and later, again) and maintained a level of involvement in science while raising children, but did not secure permanent positions until those children were in their teens. Despite these similarities and differences in the paths we have taken, the strongest bond we share is a commitment to science that has transcended professional and personal barriers to participation.

B. ELIZABETH HORNER

Born 3 years before the founding of the ASM, I, like the ASM, emerged into a societal setting in which explorers were largely men, and homemakers, women. That the organizers of the ASM were men, men known for their pioneering field work, as well as for their administrative experience,



FIG. 1.—B. Elizabeth Horner checking traps in sandstone caves along east coast of New South Wales, 80 km N of Sydney, Australia. Photograph taken 10 December 1954 by J. Mary Taylor.

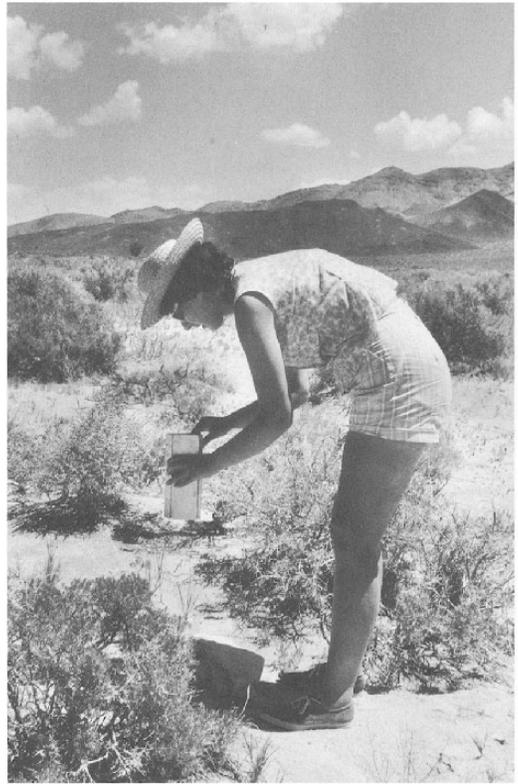


FIG. 2.—J. Mary Taylor checking a trapline in Fish Lake Valley, Nevada. Photograph taken 13 July 1962 by B. Elizabeth Horner.

reflected rather faithfully the tenor of the early years of the century. The earliest women members of the ASM, mostly wives, appear to have qualified chiefly as gracious helpmates to their illustrious husbands. With little fanfare, however, a few women were already making substantial contributions on their own. Nowhere is this more immediately apparent than on page one of the first volume of the *Journal of Mammalogy*. There, Glover M. Allen, the ASM's fifth president-to-be, notes that his entire five-page presentation is based on "amplifying slightly" a 182-page treatise on bats written by Hilda W. Grinnell.

Dramatically outnumbered by men in



FIG. 3.—Alicia V. Linzey working at home in Bloomingburg, New York, during a break from Cornell University. Photograph taken November 1962 by the late William Vogt.



FIG. 4.—Gail R. Michener and friend (*Dasycerus cristicauda*) at the Waite Agricultural Research Institute, Adelaide, Australia, in 1967.

1919, women of the ASM nevertheless marched onward. In the 40 years following inception of the ASM the percentage of women members increased at an average of 0.5% each decade; by 1959, women had reached almost 5.5% of the total membership. In the post-Depression and World War II climate of the early- and mid-1940s, the generally supportive roles played by women continued to be widely accepted, and few loudly dissenting voices were heard even in the 1950s. Educational advantages continued to favor men.

In answering how and why I became a mammalogist during the early mid-years of the ASM (1940–1959), an era when women's contributions were still relatively few, my reply is “largely by happy accident.” The choice was semi-accidental, although based firmly on an infatuation with the “magic” of the natural world. The motivation was clearly the pursuit and sharing of happiness. I think of myself primarily as

a teacher, with a special interest in mammals. As a college teacher, I have enjoyed a life of continuous learning and sharing, learning from my students just as they have learned from me. That such a mutual exchange can focus easily on mammals springs from the fact that mammals exist in a grand array of sizes, styles, and addresses; large and small, aquatic and terrestrial, solitary and social, at home and abroad, and always surprisingly complex, even as pets.

While growing up on a New Jersey farm, my earliest playmates were countless cats and dogs and, later, a gentle horse too old to carry much more than my brother and me. I loved accompanying my father through his well-groomed orchards and vineyards and absorbed to the fullest his aesthetic appreciation of the world of nature, his everlasting legacy to my developing mind. My mother was exemplary in her handling of the domestic and social expectations of both her times and our modestly comfortable circumstances. Perfectionist though she was, and I became, I nevertheless found far more joy in identifying insect friends and foes of our peach and apple trees than in dusting the Victorian furniture in our parlor. Both my parents had their college years terminated prematurely by financial crises, although my mother's brother graduated from Swarthmore and one of my father's two sisters from Bryn Mawr.

Probing our memories for first interactions with the greater world around us, my year-younger brother and I recall waving to train-loads of khaki-clad World War I soldiers returning home from service. We recall, too, that our first school bus was a horse-drawn covered wagon and that part of our school route was along a sandy road through the orchards of neighboring farms.

The stock-market crash of 1929 and the Great Depression depleted drastically the incomes of even the most frugal families. By the end of my senior year in high school, the possibility of my continuing on to college seemed completely unrealistic to everyone but me. I had a good academic

record and believed that I could probably do well in state-wide examinations for scholarship aid. Although some boys in my class went away to college, I may have been the only girl to do so.

Graduating from college in 1938, I found graduate work and teaching extremely fulfilling. Learning seemed all the more precious for having a price. Scholarships, loans, and assistantships were like "treasures from heaven." Passing from Douglass College (then called New Jersey College for Women) to Smith College (another women's college), I had, at both places, far more opportunities for financial assistance and close relationships with faculty members than I would have had at a co-educational institution.

It was actually an undergraduate professor, Leon A. Hausman, who decided my career for me. It had been my good fortune to serve as his paid assistant. It was while running the lantern slide projector for his introductory lectures in zoology that I met the spiny anteaters and kangaroos that inspired my interest in Australia; and helping him with his research on structural differences in mammalian hair sparked my long-lasting interest in the adaptive significance of small morphological differences. It was he who, before telling me, wrote to Smith College recommending me for an opening for a teaching fellowship. He thought, he said, that I belonged in teaching and that I belonged also in New England, the land of his own upbringing.

At Smith College my mentor was Ernest C. Driver, Professor of Ecology and Comparative Vertebrate Anatomy. Part of my Master's thesis was published in the *Journal of Mammalogy* (Horner, 1944) and described a craniometer I designed for use in a statistical study of variation in skulls of minks. At Smith College I was kept on as an instructor and then given a 2-year leave of absence to pursue my Ph.D., with the expectation that I would return to my teaching. My third mentor, at the University of Michigan, was Lee R. Dice, highly regard-

ed for his evolutionary studies of *Peromyscus*, and one who anticipated no problem in helping me find a job because he considered me "already established" at Smith College.

It was at Michigan that I came to recognize differences in the choices open to men and women. Among my pre-doctoral contemporaries working with Dice were John King, studying prairie dogs in South Dakota, and Walter Howard, conducting a field project at the University's George Reserve. I longed to do as they did; to study mammals in their natural habitats. In his kindly way, Dice made it clear not only that my working alone in the field would be unacceptable, but that living quarters at the Reserve were for male students only and that unchaperoned co-habitation would be improper. Those, simply stated, were the mores of the times. Because there seemed to Dice to be no viable field alternative, he suggested that I conduct my doctoral research on an indoor project comparing climbing abilities of several species of *Peromyscus* (Horner, 1954). The plan turned out well, bringing me into the behavioral area at an exciting stage in its development and enabling me to introduce, later, the first biology course in animal behavior at Smith College. Although I have always felt a deficiency in professionally guided field and museum experience, I have read the books, and shared with my own students the many lessons I've learned, soon taking one student to Australia for a year's field work and introducing other students to field projects in the Great Basin Desert of Nevada, as well as in New England.

Happy, close-to-nature childhood aside, I'm sure it was the atmosphere of the two women's colleges I attended that provided much of my career incentive. The setting was one in which women could feel the freedom to be themselves, to bask without embarrassment in the sheer joy of learning, and to acknowledge confidence in their own abilities. It was here that women always had been taken seriously and could count on be-

ing encouraged “to fly on their own wings.” At both Douglass and Smith colleges there were as many women as men teaching biology. Both of my major mentors were men, but they could equally well have been women. At Smith College, the building in which I still retain an office is Sabin-Reed Hall, named for physicians Florence Sabin and Dorothy Reed, two turn-of-the-century Smith graduates who made major contributions to public-health reform and to the diagnosis of Hodgkin’s disease, respectively. It was Dorothy Reed Mendenhall, too, whose son (one of her four children) became the sixth President of Smith College. Books by alumnae grace the classrooms, and, subtle though some of these messages may seem, they make it clear that becoming a scientist is a realistic option for women, as is the ability to combine career and family.

The positive effect of women’s colleges in influencing choice of careers reappears as I scan the list of names of women who have been closely affiliated with mammalogy and who have either taught at or attended Smith College. Faculty members teaching there within the 1940–1959 period include, in addition to myself, Eunice Chase Greene, whose detailed anatomical treatise on “the rat” appears in the literature cited sections of countless articles in the *Journal of Mammalogy*, Barbara D. Blanchard, known for a frequently cited work on *Peromyscus*, and Mary R. Dawson, an authority on mammalian paleontology. Students of Smith College who became early members of the ASM and contributed to mammalogy include Roberdeau Callery, who co-authored a presentation on development of hamsters given at the 1950 annual meeting, Mary Alice Kean, who, with husband David Reynolds, runs a bison ranch that caters to the needs of academic research, as well as to commerce, J. Mary Taylor, the first woman president of the ASM (1982–1984), and Dorcas Eason MacClintock, writer of several books about mammals, animal sculptor, and featured

banquet lecturer at the 1986 annual meeting of the ASM. Since 1959, many more of our students have contributed substantially to mammalogy, as also have faculty members Virginia Hayssen and Betty McGuire.

Of the four ASM committees appointed in 1947, the year I joined the Society, one that served a critical short-term need was the Emergency Committee for the Relief of European Mammalogists. Its purpose was to help mammalogists and their families who had been “driven from their homes by the Nazis and [were] now starving and homeless. . .” (*Journal of Mammalogy*, 1947:424). The general appeal was for food packages and for used (duty-free) clothing. Detailed instructions were mailed out by a committee of 13 members, including some of the wives of mammalogists and chaired by Carolyn Murdock.

Reaching me on essentially the first day of my own arrival on the ASM’s membership list, an invitation to help our badly battered foreign colleagues was an immediate catalyst in cementing my bond with the ASM. I believed that I had been invited not simply to membership in the ASM, but, more importantly, to usefulness. As a young faculty resident in a dormitory at Smith College, I had ample acquaintances among both women students and their gentlemen friends visiting from nearby colleges and was able to enlist their help in gathering shoes, coats, and other essential items. Helen (Mrs. Emmet) Hooper, in charge of Old Clothing Requests, had only to send me foot tracings, plus height, weight, sex, and age of those requiring assistance, and my students became veritable warehouses from which I could select items most desperately needed. Recipient families wrote back, touchingly grateful. Friendships were formed and continued as scholarly exchanges of long duration. Mrs. Hooper, handling the clothing requests, and Leona (Mrs. William H.) Burt, the food requests, devoted themselves tirelessly, as did their committee colleagues, to a carefully

planned and executed enterprise that remained active until at least early 1949.

Attending my first meeting of the ASM in 1948, in Toronto, I shared a room with Carolyn Murdock. We were the two women listed on the program of 30 papers. She spoke on aid to European mammalogists, and I presented a talk and film on my doctoral work on *Peromyscus*. Viola Schantz was there, as one of the four administrative officers of the ASM and Chairman of the Index Committee. One of her co-workers at the United States Fish and Wildlife Service, Emma Charters, was then a member of the Bibliography Committee. At the annual banquet, held at the Royal York Hotel, guests sat at a single table, elegantly appointed, and overseen by waiters in formal attire. Toasts were offered in rapid succession, each with a new glass, and each occasioning a bit of merriment as members of both the British Royal Family and its United States counterparts were lauded with light-hearted solemnity. Later we were escorted, by bagpipe brigade, into a princely room where an auction block featured pictures of European mammals sent to Carolyn Murdock by appreciative Europeans and now donated by her to the aid-abetting cause. The ASM Vice President Bill Hamilton was either auctioneer or consistently highest bidder, or both, and the entire affair augured profitably for international mammalogy!

There have been other meetings at which no women spoke. By my own calculations, the overall average for women for the 1940–1959 period included ca. 4% of the total listings. There were, nevertheless, several of these presentations that I will remember always. In 1958, at Tucson, Lois Crisler showed a remarkably engrossing film on her superb work with captive wolves in Colorado and spoke additionally about behavior of wolves on the Arctic tundra. Equally impressive were two studies described by Margaret Altmann at the 1950 meeting at Yellowstone National Park. One was on her work on social behavior of elk

and the other was her study of social organization of wild-running dog packs. Margaret Altmann became one of my idols among mammalogists. Visiting her briefly at Jackson Hole a year earlier, I had marveled at her patience and fearlessness as she went off weeks at a time, with horse and dog, telescope mounted on her saddle, making long hours of observations without disturbing the elk. To mark them for identification, she used a bow and soft-tipped arrow dipped in dye. Dorcas MacClintock came to know her well when they shared nearby offices at the University of Wyoming and admired Dr. Altmann so highly that she named one of her daughters after her. Altmann's eventual appointment to Full Professor at the University of Colorado spoke aptly to the importance of her contributions. Presentations by Edna Fisher on the sea otter, as well as the charming drawings accompanying her published articles, showed marked sensitivity, and accounts by Barbara Lawrence, at Harvard's Museum of Comparative Zoology, proved that mammalian curatorship is not a position confined exclusively to the abilities of men.

I look back on the 1940–1959 period with a touch of nostalgia for the intimacy of smaller meetings and with genuine pride in the quality and diversity of strides made by women. In full concordance with the traditions of the early mid-years of the 20th Century, most of the leading roles were played by men. Women, however, were becoming increasingly visible. Viola Schantz, treasurer of the ASM from 1930 until 1952, still the longest term served by any ASM officer, was in regular attendance. Her co-authorship of the "Catalog of the Type Specimens of the National Museum" leaves us with an important mammalogical reference work (Poole and Schantz, 1942). She was also a frequent contributor of notes and articles to the *Journal of Mammalogy* and served 18 years as Chairman of the Index Committee. The cumulative facts that two other women (Emma Charters and Carolyn Murdock) were active committee members

within the 1940–1959 period, that both Viola Schantz and Caroline Heppenstall (co-author of *Mammals of Pennsylvania*—Doutt et al., 1966) were directors of the ASM during the 1950s (1953–57 and 1957–59, respectively), Caroline Heppenstall having served additionally as treasurer from 1953 through 1956, and that the ASM's research offerings included such outstanding contributions as those of Lois Crisler and Margaret Altmann, served as unmistakable beacons of inspiration for women. As they approached 5.5% of the ASM's 1960 membership listing, women mammalogists were gradually, but compellingly, opening the doors of their male-dominated Society!

#### J. MARY TAYLOR

I was not aware until I had read the other accounts that I was probably the first woman actively involved in the ASM who both taught and established a research program in mammalogy as a professor in a large male-dominated university environment. I began this pursuit at the outset of a revolutionary change in society that has gradually led to increased acceptance of women as tenure-track faculty and as professional colleagues in major North American universities and discipline-oriented societies.

When I joined the faculty of a large university, women employed by universities anywhere in North America generally were relegated to the status of support staff, even those with doctoral degrees. They often were expected to leave the work force if they married, and their salaries were usually substantially lower than those of their male counterparts. In this highly charged and competitive academic environment, sex discrimination and harassment undermined both professional and social interactions with men more often than any of us who are women probably care to recount. Such frequent derision could readily lead to a sense of professional isolation and to emotional erosion of self-confidence and one's innermost being. Although this was the

dark side of my experience as a faculty member, far outweighing it were extraordinary professional opportunities. The university setting was so exhilarating, so rewarding, and so challenging for me that I was determined to stick to my goals and savor the positive aspects to the fullest.

I am unable to provide clear reasons as to why I entered the field of mammalogy, except that I have always loved animals. Many people were strong influences in my life, and to them I owe my gratitude for consciously or unconsciously helping me to find such a rewarding field of scientific endeavor. Some are mentioned in my account that follows.

My life as a child was always filled with music. My mother, an accomplished violinist, was part of a group of musicians who gathered frequently at one of their homes to play chamber music and she often would take me with her. Occasionally, when we were alone, my mother would prop a small violin under my chin in high hopes of finding a flicker of incipient talent in my bones, but general lack of "what it takes," compounded by double-jointed fingers, soon washed away her dreams. I took up the piano instead and dabbled in composition as well. But, in the tradition of her compatriots, my British mother also took me for long walks each day, and it was on these excursions that she helped me to learn about the common plants and animals of the area. We spent hours watching whatever came to view and often followed up by going to the library to read about what we had seen. Both my brother and I were taught to read at a very early age, and so I could help to choose the library books well before I went to school. I also kept a variety of animals in the house and, as I think back upon it, my parents had remarkable tolerance for my zealous efforts to have a household zoo.

The school I attended was at that time one of the most progressive and imaginative of its kind in the Pacific Northwest. A number of our teachers were wives of professors from Reed College and, under the

tutelage of these and other outstanding teachers, I found the process of learning immensely rewarding in this supportive environment. Classes were small and we were all encouraged to believe that we could become anything we wanted to be in life. Both boys and girls learned to handle shop tools and even to build a cabin. Learning to knit squares and balaclavas for the war effort was as much the accomplishment of the boys in the class as it was ours. It never seemed to matter whether our genders matched those of the characters we portrayed when we put on plays, or who played what position in baseball. We all did everything. This nurturing environment, combined with a deep interest in all kinds of animals fostered by my mother, were powerful influences in my future.

In my senior year of high school, I took my first biology course. It was here that I encountered the most formidable teacher I had ever had. She was tall, demanding, scary, and inspirational. We were all terrified by her severe grading of our laboratory tests and even conjured nightmares of failing her course and never graduating, but she opened my eyes to biology and I was hooked!

My father died very suddenly just as I was planning to enter college and my hopes of being able to continue my education were suddenly dashed. I needed financial help anyway, and the loss of my father exacerbated the need. I had set my heart on going to Smith College where the music department was famous and the biology program looked interesting. As I think back on it, it was an enormous risk to apply to only one college, but that was what I did. After an agonizing wait, I had one of the happiest moments of my youth when a letter from Smith College informed me that I had not only been accepted, but had been awarded a major scholarship. I was off and running! In September of 1948, I got on a plane (propeller type in those days) in Portland, Oregon, and then a train from New York to

Smith College in Northampton, both for the first time in my life.

In my sophomore year, I took Comparative Anatomy from a tall thin lady called Miss Horner. She had only recently completed her doctoral work, although she had been teaching at Smith College for several years. It did not take long to discover that she was a mammalogist for she began to tell us about *Peromyscus* and her behavioral studies on their tail length and on paternal care. She showed us some wooden livetraps and then how to set them in the field. A whole new world of biology opened up for me, and from that time on I was determined to continue my interest in biology by going to graduate school to specialize in some aspect of mammalogy. Meanwhile, I decided to major in biology, not music as earlier planned. After completing an undergraduate honors thesis, I applied to graduate school.

In 1952, I arrived on the campus of the University of California at Berkeley with a fellowship in hand and the intention of continuing in the track of my undergraduate honors research on parasites of rodents. I enrolled in a Master's degree program and had been accepted to work under the supervision of the Chairman of the Department of Zoology, Harold Kirby. Unfortunately, he died suddenly during that summer, and I arrived in the autumn to find myself an "orphaned" graduate student before I had ever begun. Nonetheless, I spent a rewarding and productive year under someone else, having chosen to work on protozoan parasites of the rodent with which I was the most familiar, *Peromyscus*. It was a project that took me into the field to trap mice and to familiarize myself with a totally different environment from that of the hardwood forests of New England.

It was in this year that I had the opportunity to meet Hilda Grinnell through the kindness of a mutual friend. She invited me to her place for tea, an event that I shall always remember. Mrs. Grinnell seemed very interested that I was trapping mice and pursuing a career as a biologist. My mem-

ory of her is of a kindly gray-haired lady, who told me many stories about the Museum of Vertebrate Zoology in the early days under the direction of her late husband Joseph Grinnell. She also told me about some of the expeditions made by Miss Alexander, founder of the Museum, and her companion, Miss Kellogg. I was spellbound! As she talked, I began to imagine going on great expeditions to Alaska and other remote places in the footsteps of Annie M. Alexander to spend my life collecting mammals. At the end of this first meeting with her, Mrs. Grinnell confided to me that when she was with young people such as myself, she encouraged them to call her by the name of one of her favorite mammals, Pipistrelle. I was so awed by her, however, that I could never bring myself to utter that name in her presence.

While at Smith College, I came to know Stella Leopold, who was completing her doctoral work under Smith College's famous plant geneticist Albert Blakeslee. Stella convinced me to look up her brother Starker, a faculty member in the Museum of Vertebrate Zoology, when I got to Berkeley. Starker Leopold introduced me to many others in the Museum, and these introductions subsequently afforded me future opportunity to return time and again. I noted immediately that all the graduate students, as well as faculty, were men. Among others, Bob Hoffmann and Joe Hall were working on their doctoral research at that time. I was fascinated by their projects and from then on I knew that I wanted to return to the Museum as a doctoral student in mammalogy. But, because teaching would probably be my career, I thought it prudent to leave after receiving my M.A. degree to try it out first.

I spent a year at Connecticut College for Women as the most junior member of the Biology Department and discovered that I liked to teach. I trapped the woodlands around New London and, as I did so I gave a lot of thought about what I might pursue as a doctoral project. Betty Horner encour-

aged me to consider working on Australian mammals. She suggested that we might collaborate on a trapping program to both serve her research endeavors and set the stage for my doctoral research. I was fortunate to secure a Fulbright Award that brought this plan to fruition. The trip took 7 weeks by freighter to sail from New York to Sydney, Australia. We took all of our field equipment, including numerous boxes of live traps. Australia was populated by only 8 million people at the time and the supplies needed for such unusual pursuits as mammalogy were virtually impossible to obtain there. In 1954, there was no Australian Mammal Society and few people who even worked with indigenous mammals.

I decided to work on the reproductive biology of a native rodent then called *Rattus assimilis*, and spent the year just north of Sydney trapping in sandstone terrain covered by eucalypt forest. Knee-length heavy boots were required in the field because poisonous snakes were ever-present. I brought back ca. 24 of these rats to Berkeley to establish a breeding colony.

At Berkeley, Paynie Pearson accepted me as a graduate student and I became the sole female graduate student at the Museum of Vertebrate Zoology. My office accommodation, however, seemed to present an awkward situation for the Museum's administration until it was resolved that I could be assigned to the office used by the Museum's illustrator, who was also a woman. She soon married and departed, leaving an unfilled desk and me with a room to myself. Space was at a premium, however, so somewhat cautiously a male graduate student was assigned the empty illustrator's desk with the *proviso* that our office door should be kept open at all times!

Through the support of fellowships and teaching assistantships, I was fortunate to complete my doctoral work in 4 years, the latter under the mentorship of Alden H. Miller, Director of the Museum (Pearson had given up his graduate-student supervision for a few years). Two aspects of the

graduate experience within the Museum were not open to women during the time I was there. One was the opportunity to be a curatorial assistant (instead of a teaching assistant) and the other was to go on collecting field trips to Mexico—or any Museum-guided trip that involved overnight stays. Fortunately, I had by then done a considerable amount of mammal collecting and also had opportunities to glean general knowledge about the curation of collections.

By the end of my degree program, I had become accustomed to savoring the heady intellectual atmosphere of a large university and wanted to continue in that kind of environment by securing a tenure-track faculty position. My fellow associates succeeded in their quest, but I did not. For the first time in my life, my faith in being able to do anything I had prepared myself for began to be seriously challenged. After mentally dealing with this reality, I then felt fortunate to be appointed as an Instructor at Wellesley College where I developed a program in mammalogy for graduate students at the Master's degree level, but I longed nonetheless for life in a university environment. While at Wellesley College, I branched out beyond the rather confining life of the college by entering into a long-term collaboration on placentation in marsupials with a colleague, Helen A. Padykula, at Harvard Medical School. I felt recharged with the intellectual excitement of university life every time I drove to Cambridge in pursuit of this project.

An early sabbatical from Wellesley College allowed me "thinking time" while spending a year in Australia on a joint project with Betty Horner on the systematics of the poorly understood array of species of native *Rattus*. By then (1963–1964) the Australian Mammal Society had been formed and there was an ever-growing group of endemic mammalogists, many of whom I met in the course of my year there. I also participated in an annual meeting and was struck by its many similarities to ours.

My personal decision following this sabbatical was to try once again to obtain a university faculty appointment. This time I was successful, in part with the help of Starker Leopold (my major professor Alden Miller had died). I had to leave my own country, however, to take advantage of this opportunity. I accepted the position of Associate Professor in Zoology at The University of British Columbia in 1965 to teach courses vacated by the well-known Canadian mammalogist Ian McTaggart Cowan when he became Dean of the Faculty of Graduate Studies. I discovered after I arrived there that I was the first woman in the department to be appointed to a professorial rank. As part of this appointment, I was given the opportunity to oversee the Cowan Vertebrate Museum. I taught advanced field courses, supervised doctoral students, and carried on a research program of considerably greater magnitude than was possible for me to accomplish at Wellesley College. I was granted tenure and was eventually promoted to the rank of Professor. In 1975, an external assessment of the salaries of the few women of comparable rank in the University disclosed major discrepancies relative to those of their male peers in each case. Our salaries were adjusted upward at the end of that year, but soon drifted behind again.

My introduction to the ASM was at the annual meeting in 1957. At that time, Viola Schantz was still publishing and Caroline Heppenstall was the outgoing Treasurer. I felt very much welcomed to the Society. From then on, I went to annual meetings whenever I could but, because of summer field research, there were blocks of years when I could not attend. After I moved to British Columbia, I began to attend more regularly once again, and in 1970 felt deeply honored to be elected to the Board. By then, I had discovered that Viola Schantz and Caroline Heppenstall were the only women to serve before me. It was at this meeting that I invited the ASM to The University of British Columbia for its next an-

nual meeting. Following the acceptance of this invitation, the outgoing President of the Society suggested that Ian Cowan serve as the Chair of the Local Committee and that I assist him, but I assured the President that I could handle it!

For all practical purposes, there was no conference center administration at The University of British Columbia at the time of our meeting, so we handled all the paperwork ourselves for the 300 or so people who came. It was the biggest event that I had ever overseen. Because hints on how to run an ASM annual meeting were relayed only by word of mouth from chairman to chairman, I decided to write a set of Guidelines for the Local Committee, which were accepted by the Board the following year. They still exist, albeit in almost unrecognizable form, having gone through numerous revisions and improvements by successive Program Committees.

Shortly after my promotion to Professor, I married Bill Kamp, an entomologist. He supported me wholeheartedly in my career, and we made every effort to go to one another's professional meetings. His appearance at the ASM meetings precipitated a shift in the program title "Activities for Wives" to "Spouse's Activities." He thoroughly enjoyed being the escort to the lady spouses on outings planned by local committees while the rest of us attended papers.

I was elected First Vice-President of the ASM in 1978, the first of two successive terms, appointed Associate Editor in 1981 and elected President in 1982. These honors came as a very painful part of my personal life began to unfold. My husband was diagnosed with cancer and soon thereafter my mother, who lived alone and in the United States, broke her hip. Furthermore, my husband was advised to go to the States for specialized radiation treatment, which he did. The consequence was that both were in the United States (fortunately, in the same place) while I was in Canada. I took a leave so I could try to help them. When it became clear that their medical problems would be

prolonged, I then resigned my professorship at The University of British Columbia after 17 years there and moved permanently to the United States.

Although my personal world seemed to be falling apart while each of my family coped with life-threatening medical conditions, my call to service for the Society at that time helped me to retain some perspective and a sense of contribution at the professional level. During long hours in hospitals or doctors' offices, I wrote a field guide to the terrestrial and marine mammals of Australia that was subsequently published by Oxford University Press (Taylor, 1984).

I received an honorary appointment at the Oregon Regional Primate Research Center as well as a Courtesy Professorship at Oregon State University, the latter through the kindness of B. J. Verts. My own life improved along with the status of my family's health. During the next few years, I completed several research papers, including a monographic revision of native *Rattus* of New Guinea, co-authored with John Calaby and the late Hobart Van Deusen (Taylor et al., 1982). By now it was clear that my husband, who meanwhile sustained another bout of cancer, would never be able to follow a career path again. With his endorsement, I decided to pursue my deep interest in the museum world. I was fortunate to be appointed Director of The Cleveland Museum of Natural History in 1987 and we moved to Ohio. Soon thereafter, Bill's health began to fail once again. He died 3 years later, just 2 months after my mother passed away, a time of deep grief in my personal life.

I was enormously challenged by my senior administrative position in a large museum, and found myself having to learn the art of fundraising for a \$14 million project that we launched within the first year of my tenure (we raised >\$15 million!). I found this to be a very different world from academia and in many ways far more rewarding. My research has suffered from the

pressures of administration, although in 1994, as Chairman of the Rodent Specialist Group, I gave a paper at the annual meeting of The Biological Society of New Guinea. My collaboration with Australian mammalogist John H. Calaby (Honorary Member of the ASM, 1993), CSIRO Division of Wildlife Research, on tropical rodents and small marsupials of Australia continues to this day.

At the first meetings of the Association of Science Museum Directors that I attended, I was the only woman present. I began to wonder whether my reaction to this situation was similar to that which Viola Schantz may have had in the "early era" of the ASM. It was never a feeling of not being welcome, but rather one of concern as to whether my male colleagues would really understand how much I wanted to be truly integrated into a profession that traditionally had always been their's.

It was 37 years ago that I began my career as a mammalogist with a Ph.D. in hand, and over these years I have witnessed enormous progress in the ongoing acceptance of women in my profession. This should be heartening to those younger than I. In the spirit of continuing to believe that we can accomplish anything reasonable in life that we wish to do, I am confident that we are on the home stretch of reaching an acceptable goal of professional integration and equality in our discipline.

#### ALICIA V. LINZEY

I cannot remember when I was not interested in biology; the roots of that passion lie deeply in the foothills of New York's Catskill Mountains, where I was born and lived until entering college. Our family included five children (although in virtually two generations) and I was the only girl. Until I was 15 years old, we lived on an old farm in a converted-barn house that was surrounded by 16 ha of pastures, streams, and woods. My father's interest in farming, fueled by a quixotic mixture of a city upbringing and a 2-year degree in poultry hus-

bandry and ornamental horticulture, paled while I was in grade school and he turned to constructing custom-built homes. My mother, who had some college-level training in chemistry and ornamental horticulture, also wrote short stories and poetry. Although she never worked outside the home, she was the bookkeeper for my father's business.

Despite what appears to be a provincial upbringing, I always knew that my family was different. In particular, my mother was born in Cuba to an American father and a Spanish-Irish mother. Her family consisted of well-educated business people who were prominent in the economic affairs of pre-Castro Cuba. Our rural farmhouse was bilingual, rich with books, filled with aromas of "exotic cooking," and occasionally visited by relatives from Cuba and Spain. Thus, the world beyond my tiny town was very real to me and the possibility that I, like my family, might end up being a bit unconventional was not at all unsettling.

As a child, much of my time was spent exploring the environs of our farm, camping (sleeping in a "tent" made from an old army blanket stretched over a rope strung between two trees), or just sitting under a tree in a special reading place. My parents took an active role in encouraging my interests. For example, my mother started a Girl Scout troop to provide the scouting experience for me, and my father was an active collector for a natural history museum that occupied every nook and cranny of my bedroom. My interest in the natural world was shared by my brothers, although they turned to other subjects as they progressed through school.

Through eighth grade (1956), I attended one of those now-mythical stone schoolhouses where eight grades were distributed among three classrooms. I recall that very little science education was provided to my class of ca. 10 students, but a perceptive sixth-eighth grade teacher purchased Edmund Scientific kits for my use, as well as developing a guided reading program. I was

a voracious reader and, because I read whatever was available in our small-town library, the subject matter ranged considerably. I enjoyed classics and biographies, but avidly devoured boys' adventure books. This peculiar amalgam of a rural upbringing, cosmopolitan household, supportive parents, and vicariously experienced adventures left a deep imprint on my subsequent life.

In high school, I was strongly influenced by a female teacher who taught biology and chemistry. She was of indeterminate age, with iron-gray hair, an erect posture, stern demeanor, and high expectations. She also was unmarried and caring for aging parents. Although I was not particularly drawn to her life style, she introduced me to biology as I had never before experienced it. All those preserved specimens that repelled most of my classmates were endlessly fascinating to me. Her influence drew me away from history and literature and I am quite certain that she was largely responsible for my formal pursuit of science.

I apparently performed adequately in high school, as evidenced by acceptance into Cornell University at a time when there were limited slots for females in the College of Agriculture. In fact, I was so determined to attend Cornell University that I never applied anywhere else. Strongly influenced by my high school science teacher (and probably a bit confused), I initially entered a biochemistry program. It quickly became clear to me that the program involved far too much chemistry and not nearly enough biology. At the end of the semester, I transferred into the Department of Conservation and majored in vertebrate zoology. My classmates were overwhelmingly male, including some individuals who became well-known figures in mammalogy (e.g., Jim Brown and Gordon Kirkland). My advisor was William J. Hamilton, Jr. and I was a member of the last class in mammalogy taught by him before his retirement.

My experiences at Cornell University left

me with life-long commitments to working with mammals and to conservation. My first part-time job was working for Hamilton in the mammal collection, which was then annexed to his office in Fernow Hall. The unique experience of learning about mammals from Hamilton and graduate assistant John Whitaker drew me into mammalogy. I joined the ASM in 1962, when I was a college sophomore. At about the same time I met Don Linzey, who was a Master's student in the department working under Hamilton (but in herpetology at the time), and we were married in 1963. In that the same year, Hamilton retired and Jim Layne began what was to be a 3-year stint at Cornell University. This timing proved to be critical because Layne opened the door to a world beyond natural history and deepened my appreciation for the endlessly fascinating genus *Peromyscus*. As a senior, I began working with the use of male reproductive anatomy in systematics of *Peromyscus*. I graduated in 1964 and, continuing this research, completed a Master's degree the following year under Layne's direction. My first presented paper was at the 1967 ASM meeting in Nags Head, North Carolina; unfortunately, I was too numb to remember anything about the experience except the feeling of terror. My association with Layne continued after we both left Cornell University and we ultimately co-authored two papers on male reproductive anatomy and sperm morphology in *Peromyscus* (Linzey and Layne, 1969, 1974).

My first years in mammalogy were spent working on my research with *Peromyscus*, as well as in collaborative research with my ex-husband in the Great Smoky Mountains National Park, where he was conducting Ph.D. studies on the golden mouse (*Ochrotomys nuttalli*). It was during this period that my first published paper, a rather modest note, appeared in the *Journal of Mammalogy* (Linzey and Linzey, 1966). Although I was accepted into the doctoral program at Cornell University, I withdrew when it became clear that I would not have

the opportunity to complete the degree. Dual influences at that time were pressures to "start a family" and for my ex-husband to secure permanent employment. The possibility of my having a career was never considered. My older son, David, was born in 1967 while I was in the midst of working on a growth and development study of *P. maniculatus nubiterrae*. The only way I could sustain the study was to convert an extra room in our home to an animal room, with the result that my research animals and my newborn son slept in adjoining rooms. I recall cleaning cages the day before he was born, and worrying about the data I would miss while in the hospital.

In August 1967, we left Ithaca for Mobile, Alabama, where my ex-husband took a position at the University of South Alabama. For the next 10 years, I was a full-time mother and a very marginalized scientist. My younger son, Tom, was born in 1969. I secured a title of Research Associate with the University and struggled to maintain some level of professional involvement through collaboration with my ex-husband. I attended only one annual meeting of the ASM between 1967 and 1979 (1973, University of South Florida). My participation in the ASM during those years was restricted to working with the late Marie Lawrence as a bibliographic reviewer for *Citations in Mammalogy*. The other outlet for my professional energies at that time was involvement in conservation activities, initially as a co-founder and active member of the Mobile Bay Audubon Society and subsequently with the Alabama Conservancy. I also had leadership roles in ad hoc organizations involved in coastal-zone, management policy and preservation of wild rivers. Although these years were busy with the joys and trials of motherhood and filled with activities that enriched my background, I became increasingly unhappy with the level of professional participation available to me. My role as a perennial "research assistant" and lack of opportunity to

pursue Ph.D studies were particularly frustrating.

In 1977, we moved to Blacksburg, Virginia, and I immediately enrolled in a Ph.D. program at Virginia Tech. Working with Jack Cranford, and with added help from evolutionary ecologist Robin Andrews (both offering much-needed moral support), I followed my natural inclination toward field research and metamorphosed into an ecologist. The challenge of keeping up with my younger, more recently educated classmates and two active sons at the same time was sometimes overwhelming. Although my children (at 8 and 10 years of age) no longer required constant attention, they were still my primary responsibility. Whenever possible, my classes were scheduled around their school day. My field research on *Synaptomys* and my children's activities were intimately entwined, especially because the majority of my field sites were in proximity to our house. I can remember carrying dress clothes to one of my more distant field sites, checking traps, changing in the car, and breaking the speed limit to arrive at a Boy Scout event on time. Although pursuit of a doctoral degree was initially an end in itself, my horizons and personal ambitions grew in tandem with my intellectual growth.

The 5 years spent in Virginia were among the best and worst years of my adult life. I delved into courses and research with "born-again" zeal, and enjoyed the interactions with faculty and other graduate students. My marriage, which had been deteriorating for many years, declined precipitously during this time and effectively ended shortly after I received the Ph.D. degree. During the following year (1981–1982), I taught at Roanoke College in a temporary position and coped with the realization that, with neither a personal life nor a permanent job, I lacked a stable base for my existence. I left Virginia to take my first "real" position in 1982, when I became a new (but at almost 40, not young) Assistant Professor at Indiana University of Pennsylvania

(IUP). Between learning how to be a single parent and a faculty member, my first year at IUP was filled with frantic activity, but it ended with a feeling of great accomplishment at having survived the transition! I have never outgrown the feeling of astonishment at being paid to do what I love.

When I came to IUP, there was only one other female faculty member in the Department of Biology (largely teaching at a branch campus). There are now four of us in a permanent full-time faculty of 29. I am unaware of any obstacles to professional growth resulting from being a female in a male-dominated department and have been promoted after minimum periods in rank. However, as I interact with my female students, it is disturbing to see them confronted with the same dilemmas that I faced 30 years ago and, more often than not, feeling obligated to set aside their own hopes and dreams to accommodate those of their male partners.

The most challenging aspect of my current position has been finding time for research at a primarily undergraduate institution that has teaching as a primary mission. At institutions like IUP, a combination of heavy teaching loads, high expectations of service, and an unpredictable graduate-student resource base can easily threaten even a modest research program. The antidotes to such situations are maintaining professional ties with other researchers through societies such as the ASM, and finding suitable colleagues to provide encouragement and occasional reminders about priorities. I was fortunate to find a fellow mammalogist, Michael H. Kesner, in my own department and we have enjoyed a productive collaboration for the past 11 years. A second challenge has been to find time for a personal life. My husband of 10 years, Neil J. Asting, is a faculty member in our Department of Chemistry. He not only understands the demands on my time, but also has unfailingly supported my dreams, even when they have taken me far from home for long periods. A secure pro-

fessional base, stable personal life, successfully launched children, the realization of a life-long dream to work in Africa, and the luxury of determining my own priorities, all have contributed to making the past few years extremely satisfying. Life persists in offering both challenges and role models. Women like Katharine Payne of Cornell University, who studies elephants under difficult and dangerous circumstances, continue to remind me that youth is not a prerequisite for responding to a sense of adventure.

Although I am a member of a cohort of women who became members of the ASM in the 1960s, it was not until the 1980s that I finally became a full-fledged member of the scientific community. I began attending ASM meetings on a regular basis in 1979 while at Virginia Tech, only being absent in 1982 (when I was too poor) and 1992 (when I was in Africa). In parallel with my own career development, the ASM has grown in terms of participation by women. This growth was slow at first, with percentages of women presenting papers at annual meetings growing from 7% to 18% between my first presentation in 1967 and my second in 1980 (Gill and Wozencraft, 1994). In the 1960s and 1970s, only six women served as board members or committee chairpersons (Judy Eger, Mary Etta Hight, Betty Horner, Marie Lawrence, Viola Schantz, and J. Mary Taylor). The rapid growth of women's roles began in the mid-1980s during the presidency of J. Mary Taylor, accelerated while Elmer Birney and Jim Brown were leading the ASM, and has continued to the present. A prominent feature of this change, which has been reflected in my own service to the ASM, is that broad-based involvement has begun to move beyond service aspects (committees) and into leadership roles (officers), as well as into the scientific enterprise (editorships). The continued vitality of the ASM will require participation of all members of our talented younger generation. Thus, this trend must continue until including women

as full participants in all activities of the ASM happens without the need to make a conscious effort to do so. I am confident that this will occur because my own experiences in the ASM have demonstrated that it is a caring and committed organization.

#### GAIL R. MICHENER

As a victim at the age of 6 years of the 1952 poliomyelitis epidemic in Australia, my childhood dream of becoming a ballet dancer was set aside and not replaced by an alternate career goal until my undergraduate years. The lack of emphasis on sciences in the 1950s at St. Peter's Collegiate Girls' School, a private Anglican establishment with an all-female staff in Adelaide, South Australia, would likely have led me to a different career had I completed my schooling there. However, in grade eight, I transferred to a nearby state-run high school. Socially, this was a major change because both the student and teacher populations were about equally male and female. Since then I have consciously avoided aligning myself with unisex groups.

Despite the city orientation of my British mother and Australian father, I acquired a love both of animals and being outside from them, although the animals were domestic pets and the outdoors was the beach, a reflection of the family's habit of exercising our pedigreed show dogs on the beach every weekend. From age 10–15 years, my personal pets were white mice and budgerigars; the former in part was a rebellion against the fact that girls were meant to be afraid of mice. My first opportunity to study biology formally did not arise until grade 12, at that time in Australia a post-matriculation year for university-entry students. Despite advice from teachers to take mathematics, I chose biology and placed second in my class. Although my biology teacher was not very effective in the classroom, and I recollect her to have been the stereotypical unattractive spinster who was teased unkindly by the 12th-grade boys, the appeal

of biology outweighed these potentially negative influences.

I recollect no point in my life when I felt disadvantaged as a woman, but this is not to say that I was not influenced by the conventional mores of Australian society in the 1950s and early 1960s. When I was one of a small group of high school students to win a Commonwealth Scholarship to enter university, I was most offended when the 12th-grade boys teased me by saying "You'll be a professor yet," and I reacted with the typical indignation of a 16-year-old who wanted to be popular with boys and thought female professors were ugly old maids. In my high school years, and even my undergraduate years, I had the usual expectation that I would marry, raise a family, and be a housewife. The possibility of a career and a family was not something I contemplated in my teens, more because my horizons extended only to the short-term future rather than that I believed it could not be done.

From as early as I can remember, my parents expected me to attend a university, no doubt partly to make up for opportunities they did not have themselves; both of my parents were the youngest in families of five children and both had their lives interrupted by World War II. My father was employed as a legal representative by the employees association of the state government. Until I was 10 years old, my mother was a traditional housewife rearing two children and doing volunteer service; she then worked as a secretary-receptionist for a decade, helping to earn the money that enabled my parents to take me on trips to Europe, New Zealand, and Fiji. Because of my affinity for animals, my parents thought I would want to be a veterinarian. However, I did not view the prospect of dealing with sick pets and their distressed owners as attractive. Instead, I chose to pursue a science degree that included some component of biology.

The 3-year science program at the University of Adelaide was, in the early 1960s,

rather simply structured. Undergraduates took four science subjects in their first year, three in second year, and two in third year. The zoology course I took in the first year was immensely influential because it included a survey of the animal kingdom that revealed the wonders of animal phyla I had not yet heard of and it included a segment on ecology taught by H. G. Andrewartha. Thereafter, I majored in zoology and continued to find Andrewartha's lectures in ecology to be the most interesting and appealing, although he was a rather quirky lecturer who lapsed into prolonged silences or became so excited his voice rose to a high-pitched squeak. One highlight of my third undergraduate year in 1965 was a week's trip to the CSIRO Marine Station in New South Wales awarded to the top four zoology students from each of the Australian universities. That year, all four students from the University of Adelaide were women and ca. 40% of participants were women. At the marine station I conducted a short project, in cooperation with CSIRO statisticians, on the distribution of limpets in tidal pools and gave an oral presentation of the results. This first experience at public presentation sparked a life-long love of talking about my research.

When 19 years old and about to complete my 3-year degree, but with no particular goals or employment opportunities, a male professor at the University of Adelaide (Shelley Barker, then a marsupial physiologist) convinced me to take an Honours Degree. The 1-year Honours Program at the University of Adelaide, which became my gateway to an academic career, involved a modest thesis project and three subsidiary projects assigned by various faculty. My thesis work (supervised by Andrewartha) on the activity of ants, provided an opportunity to design and conduct my own field observations and convinced me that I wanted to do research, preferably outdoors, and ideally with somewhat larger and more appealing subjects than ants. My first opportunity to work with mammals came the fol-

lowing year when I was employed as a research assistant to work with captive marsupial mice (*Dasyercus cristicauda* and *Sminthopsis crassicaudata*) in the Department of Animal Physiology at the Waite Agricultural Research Institute in Adelaide.

Although no women were directly influential during my adult years in Australia, the presence of some women laboratory instructors and lecturers at the University and some women scientists at the Waite Institute provided the assurance that no doors were locked to me just because I was female. Through meeting R. F. Ewer, who visited the University of Adelaide when I was an Honours student, I realized that animal behavior, a subject that had not been included in my undergraduate training, was a legitimate field of study. Access to the colony of marsupial mice at the Waite Institute provided my first opportunity to observe mammals and resulted in my first publication (Michener, 1969), in the *Journal of Mammalogy*. Meanwhile, immediately after completing my Honours Degree, I married Tom Wigley, a graduate student in theoretical physics. A planned 3–4-year stay in North America commenced in January 1968 when Tom was hired by the University of Waterloo in Ontario, Canada, and I registered in a Master's program. Although I wanted to work with mammals, a combination of my previous experience with insects and availability of a supervisor led to a project on aquatic beetles. However, I was not happy either with that project or my marriage.

Dan Michener was a fellow graduate student at the University of Waterloo about to complete his Master's degree and move to the University of Saskatchewan, Regina Campus (now the University of Regina) to continue ecological work with Richardson's ground squirrels under the supervision of David H. Sheppard. I wrote to Sheppard inquiring about graduate opportunities with him, was accepted, and accompanied Dan to Regina in mid-1968. Dan and I subsequently married in 1971 and, although Dan

has since changed careers, my on-going work with Richardson's ground squirrels is a happy consequence of being able to blend our careers.

As an Australian who had not been to the prairies, I had little concept of what ground squirrels were like. My initial plans for a Master's project were based on no wiser decisions than that I wanted to work with the same species as Dan and that I wanted to study behavior. Because I had received no formal training in animal behavior in Australia, I took an undergraduate course in behavior in my first year at Regina. A laboratory experiment on retrieval behavior by lactating mice set me wondering whether ground squirrels, who rear their offspring in spherical underground chambers in total darkness, would retrieve their infants. Answering that question set me on the path from which my subsequent research emerged. After a year of graduate work, I received a Post-Graduate scholarship from the National Research Council of Canada and my supervisory committee recommended that I switch to a Ph.D. program. I submitted my doctoral thesis in 1972, several months after Dan and I adopted our only child, Rory.

The only annual meeting of a professional society that I attended as a graduate student was the ASM meeting in Vancouver in 1971. Gill and Wozencraft (1994) estimate that <15% of participants that year were females. Partly due to two incidents involving inebriated male graduate students, I did not attend another ASM meeting until 1979. However, I do have two positive memories, involving male mammalogists, from Vancouver, meeting Guy G. Musser and Jan O. Murie. Musser, then Editor for Notes in the *Journal of Mammalogy*, took time to explain the role of an editor in the publication process. Murie eventually became Dan's External Examiner, my post-doctoral mentor, and a valued colleague and collaborator.

With our doctoral degrees in hand, Dan and I sought faculty positions. Dan was the

only member of his immediate family of parents and three siblings who had not lived in Africa, so we focused our search on countries that were African members of the British Commonwealth. In August 1972, we became faculty members in the Zoology Department at the University of Cape Coast, Ghana. One of the advantages of living in Ghana was the availability of cheap labor, which enabled us to hire a full-time baby nurse for our son. However, we soon realized that life in Ghana would not enable either of us to achieve our career goals. Dan wanted to pursue a long-term, but unfulfilled, interest in farming and I wanted to be an academic in a more mainstream institution. Responding to a suggestion from Jan Murie, I applied for and received an Isaac Walton Killam Post-doctoral Fellowship, tenable at the University of Alberta, Edmonton, to study the social organization of Richardson's and Columbian ground squirrels. In August 1974, we returned to Canada. Dan immediately found employment near Edmonton as a farm laborer with a business-minded farmer who, seeing Dan's potential, provided numerous training opportunities so Dan could make the transition from academic to farmer. We placed our son in a day-care center; although he enjoyed the sociability, I felt sufficiently guilty that for the first year I picked Rory up after his afternoon nap, which meant I missed seminars and post-seminar conviviality. The summer was a problem because Dan's farm-work hours were far longer than day-care hours and my field site was a 5-h drive from Edmonton; the solution was to hire a field assistant who mostly spent her time observing Rory, not ground squirrels.

Our next move was directed to helping Dan achieve his goal of farming independently. We headed to southern Alberta, renowned for its warm chinook winds in winter. Here we purchased a farm, and I found part-time employment for 4 years in the Department of Biological Sciences at the University of Lethbridge. Initially I was an instructor for introductory biology and ge-

netics labs and subsequently a replacement for faculty on study leaves. Presenting my research at professional meetings became an important means of validating my worth as a researcher and overcoming the sense of professional isolation associated with my position as a part-time academic employee. Because field work with Richardson's ground squirrels was relatively inexpensive, I was able to maintain a research program with minimal funding and the generous loan of live traps from the Department of Agriculture of Alberta. Even more generous was financial assistance from Jan Murie; his contributions to my travel costs to meetings helped maintain my professional affiliations. I attended my first meeting of the Animal Behavior Society (ABS) in 1976; that was such an exciting and stimulating experience that I attended ABS meetings in 15 of the 18 ensuing years. In that same 18-year period, I attended six meetings of the ASM. The preference for the ABS meetings was largely due to a difference in atmosphere; the male-biased academic propinquity that typified the ASM (Whitaker, 1994) was less noticeable in the ABS and participation of women in the ABS was greater at all levels. For example, whereas only one of 38 ASM presidents from 1919 to 1994 has been female (Layne and Hoffmann, 1994), five of 30 ABS presidents from 1965 to 1994 have been female (including myself in 1992–1993).

In 1980, several events encouraged me to persist in academia although I had no immediate prospects of regular employment. John Eisenberg and Devra Kleiman invited me to participate in a conference on mammalian behavior and I was hired for a semester by the University of Colorado at Boulder to teach animal behavior. Further, Luke Stebbins, then Chair of Biological Sciences at the University of Lethbridge (and by coincidence a mammalogist) encouraged and supported my application for a 5-year University Research Fellowship (URF), which I held at the University of Lethbridge commencing January 1981. The

following year, Jan Murie (still at the University of Alberta) and I organized a conference on the ecology and behavior of ground squirrels (Murie and Michener, 1984).

When, in 1983, Elmer Birney proposed that I serve as an Associate Editor for the *Journal of Mammalogy*, I suspect that he was unaware that I held only a research fellowship and not a regular faculty position. Because I thoroughly enjoy editing and wanted to serve the Society, I neglected to clarify my academic status to Birney. I was the second woman (after J. Mary Taylor) to serve as an Associate Editor for the *Journal of Mammalogy*. The 4-year period of my associate editorship marked my closest affinity with the ASM; I attended ASM meetings in 3 of those 4 years (1984, 1985, and 1986) and was in contact with many members who were authors or reviewers of articles. After I completed my editorial stint in 1987, another woman was not appointed until 1993 (Verts and Birney, 1994).

Not until 1985, as I approached my 40th birthday, did I finally obtain a regular faculty position at a Canadian university. Extension of my fellowship for an additional 5 years was contingent upon the offer of a faculty position, and Stebbins, still departmental Chair, was instrumental in creating this opportunity for me at the University of Lethbridge; however, it did require that I accept the somewhat unaccustomed job of teaching courses in animal physiology. I received tenure 2 years later, followed by promotion to the rank of Professor in 1990. In 1993, I received the Distinguished Teacher Award from the University of Lethbridge and in 1994, the ASM named me recipient of the C. Hart Merriam Award.

A major influence on my life in the mid-1980s was the founding of my own study site on the farm that my husband and I had bought in 1978. Dan generously fenced off a 1.5-ha area of the farm where I could control grazing to maintain suitable habitat. Here I released a few ground squirrels from a former study site that was about to be

destroyed by the landowner. The ground squirrels thrived; not surprisingly, they did not respect the boundaries of the fence and encroached around the farm buildings and grain bins, a reality that Dan accepted with good grace. The availability of a population of animals literally at my front door has enabled me to take on projects, such as daily monitoring of torpor during winter (Michener, 1992), that are only feasible when the animals are an integral part of my everyday life.

#### LITERATURE CITED

- DOUTT, J. K., C. A. HEPPENSTALL, AND J. GUILDAY. 1966. Mammals of Pennsylvania. Pennsylvania Game Commission, Harrisburg, and Carnegie Museum, Pittsburgh, 283 pp.
- GILL, A. E., AND W. C. WOZENCRAFT. 1994. Committees and annual meetings. Pp. 155–177, in *Seventy-five years of mammalogy (1919–1994)* (E. C. Birney and J. R. Choate, eds.). Special Publication, The American Society of Mammalogists, 11:1–433.
- HORNER, B. E. 1944. A new craniometer for carnivore and other mammalian crania. *Journal of Mammalogy*, 25:71–77.
- . 1954. Arboreal adaptations of *Peromyscus*, with special reference to use of the tail. Contributions from the Laboratory of Vertebrate Biology, University of Michigan, 61:1–84.
- LAYNE, J. N., AND R. S. HOFFMANN. 1994. Presidents. Pp. 22–70, in *Seventy-five years of mammalogy (1919–1994)* (E. C. Birney and J. R. Choate, eds.). Special Publication, The American Society of Mammalogists, 11:1–433.
- LINZEY, A. V., AND J. N. LAYNE. 1969. Comparative morphology of the male reproductive tract in the rodent genus *Peromyscus* (Muridae). *American Museum Novitates*, 2355:1–47.
- . 1974. Comparative morphology of spermatozoa of the rodent genus *Peromyscus* (Muridae). *American Museum Novitates*, 2532:1–20.
- LINZEY, D. W., AND A. V. LINZEY. 1966. A second record of the meadow jumping mouse in Tennessee. *Journal of Mammalogy*, 47:123.
- MICHENER, G. R. 1969. Notes on the breeding and young of the crest-tailed marsupial mouse, *Dasycercus cristicauda*. *Journal of Mammalogy*, 50:633–635.
- . 1992. Sexual differences in over-winter torpor patterns of Richardson's ground squirrels in natural hibernacula. *Oecologia* (Berlin), 89:397–406.
- MURIE, J. O., AND G. R. MICHENER. 1984. The biology of ground-dwelling squirrels: annual cycles, behavioral ecology, and sociality. University of Nebraska Press, Lincoln, 459 pp.
- POOLE, A. J., AND V. S. SCHANTZ. 1942. Catalog of the type specimens of mammals in the United States National Museum. *Bulletin of the United States National Museum*, 178:1–705.
- TAYLOR, J. M. 1984. *The Oxford guide to mammals of Australia*. Oxford University Press, Melbourne, Australia, 148 pp.
- TAYLOR, J. M., J. H. CALABY, AND H. M. VAN DEUSEN. 1982. A revision of the genus *Rattus* (Rodentia: Muridae) in the New Guinean region. *Bulletin of American Museum of Natural History*, 173:177–336.
- VERTS, B. J., AND E. C. BIRNEY. 1994. Publications. Pp. 139–154, in *Seventy-five years of mammalogy (1919–1994)* (E. C. Birney and J. R. Choate, eds.). Special Publication, The American Society of Mammalogists, 11:1–433.
- WHITAKER, J. O., JR. 1994. Academic propinquity. Pp. 121–138, in *Seventy-five years of mammalogy (1919–1994)* (E. C. Birney and J. R. Choate, eds.). Special Publication, The American Society of Mammalogists, 11:1–433.