

Jeff Palmer, Distinguished Professor of Biology and Class of 1955 Professor, retires in 2019 after 30 years at IU. Jeff's father was a Foreign Service Officer in the State Department, and so Jeff enjoyed a world-capital childhood. Born in London, he lived there and then Athens for his first six years. A final familial move took him to Washington D.C., where Jeff fell in love with nature, especially the botanical world. College took him to Swarthmore, and grad school to Stanford. There he fell in love twice more. Forever with Mimi Zolan, his soulmate of 40 years, who retired as IU Professor of Biology last year. And probably forever with the genomes of chloroplasts and mitochondria. These evolutionary marvels tell a two-billion-year story of endosymbiosis, phylogeny, and *trans*-compartmental integration at the most intricate and, to Jeff at least, awe-inspiring levels.

Starting in graduate school and continuing in his five faculty years at Michigan and the early IU years, Jeff pioneered two related fields of study. One was comparative genomics, where he made a series of ground-breaking discoveries concerning the structure and evolution of plant chloroplast and mitochondrial genomes. The other was plant molecular phylogenetics, where he used chloroplast DNA variation to elucidate the genealogical history of plant evolution. He developed widely used methodology, trained many current leaders, and published numerous influential studies.

Over the past 25 years, Jeff's lab conducted equally pioneering work on evolutionary gene transfer. He described the first cases of modern-day, functional transfer of organelle genes to the nucleus and elucidated mechanisms, rates, and constraints on these transfers. He discovered that plants capture genes, and even whole genomes, from other plants and even algae. He showed that these horizontal transfers occur remarkably often in plant mitochondrial genomes but never in their chloroplast genomes, and that mitochondrial fusion is the driving force for this profound difference. Jeff's ventures outside the world of plant organelle genomes have also broken new ground, on topics as diverse as the origin and evolution of nuclear introns and the deep phylogeny of the tree of life.

Jeff's numerous scientific honors include an NSF Presidential Young Investigator Award in 1985, the David Starr Jordan Prize in 1991, an NSF Special Creativity Award in 1991, election to the American Academy of Arts & Sciences in 1999 and the National Academy of Sciences in 2000, a Guggenheim Fellowship in 2005, and the McClintock Prize for Plant Genetics and Genome Studies in 2016.

Jeff is most proud, however, to have won the high esteem of his trainees and Biology colleagues. He trained 40 postdoctoral fellows and 20 graduate students, many of whom have had notable careers themselves. Jeff was an outstanding and devoted research mentor. His mentees recognized this on the occasion of his 50<sup>th</sup> birthday in 2005, when they organized and traveled from around the world to attend, write appreciations for, and speak in "Genomes in Flux: A Symposium in Honor of Jeff Palmer." One mentee wrote: "I use 'Jeff Palmer' stories all the time to inspire my students and postdocs." Another said: "Palmerlab was an amazing place to work. The group you assembled and the leadership you provided in countless big and small ways

is always an inspiration...It felt like (and was pretty much true) that the really exciting stories in plant systematics and evolution, molecular evolution, and genome evolution, were coming from the Palmer lab. It's a testament to your leadership how much that has remained the case through two decades."

Jeff's trainees were in awe of his deep vocabulary, which painted the colorful prose that make his writing instantly recognizable and his papers so enjoyable to read. Despite rolling their eyes as Jeff edited and re-edited their manuscripts, his trainees happily inherited his consummate editing "skills" and eye for detail. And although many tried, only one ever bested Jeff in ping pong. Humiliated opponents often cited apparent supernatural forces and his homecourt advantage. Jeff's students and postdocs always felt that their interests and successes were of paramount importance to him, and it was this, perhaps more than anything, that they appreciated and admired in Jeff.

Faculty esteem came in the form of Jeff's election (or re-election) as department chair four times. He actually served as chair for "only" 10 years, twice stepping down early because the job was taking too big a toll on his research program (and sanity). As chair, Jeff worked tirelessly for the good of the department, ushering in a new era of faculty growth that helped transform the department, building excellence in areas from microbiology to evolution. He also helped foster a renewed appreciation and commitment to the department's teaching mission. He fiercely and unyieldingly championed the interests of the department, and of the sciences in general, with five College Deans and with several Chancellors, Provosts, and IU Presidents. For example, he led the 3-year, very much uphill battle that sited Simon Hall so propitiously.

What's next for Jeff? More time with family and friends. Much travel with Mimi, especially to the splendors and solitude of nature, including the magnificence of Utah, where son Michael lives. Visits to a few special cities, especially London, where son Nick lives. Community service. Continued scientific research, but less consumingly so. A return to the tennis court and the ping-pong table. Hiking in the woods. Tending to his back-to-the-forest yard. Knowing Jeff, a listaholic of the best and worst kind, his retirement list undoubtedly runneth over. I wish him well in balancing his many passions.

*Lynda Delph*