MEMORIAL RESOLUTION
Kathleen Anne Matthews
(1954-2018)

Kathleen Anne Matthews died March 17, 2018, at her home in Bloomington, Indiana, following a brief illness. She was born March 8, 1954, in Japan, where her father, Charles Matthews (1915-2002), and mother, Angeline Stevens Matthews (1917-2018), were stationed. In 1962, the family, including her brother Stan and her sister Julie, settled in Brownsville, Texas. She leaves behind her brother and sister and husband Lawrence as well as a devastated community of scientists.

Kathy received her B.A. in general studies in 1975 and a Ph.D. in genetics in 1979 from the University of Texas at Austin. Her thesis research in the laboratory of Yuichiro Hiraizumi concerned the genetics and population dynamics of mobile genetic elements. In 1979, she moved to Indiana University for postdoctoral studies in the laboratory of Thomas Kaufman. Her work there focused on the genetics, molecular, and developmental biology of the α-tubulin gene family in *D. melanogaster*. The striking contrast between her thesis work and her postdoctoral project illustrates not only her wide-ranging scientific interests but also her technical fearlessness. She remained in the IUB Department of Biology and was promoted through the research scientist ranks, attaining the position of Senior Research Scientist at the time of her death. In 1986, she helped orchestrate the move of the national repository for genetic strains of the research organism *Drosophila melanogaster* to IU and eventually became its managing director. When the repository was moved to The Bloomington *Drosophila* Stock Center (BDSC), the Cal Tech collection contained 1,600 lines of mutant strains. The collection has grown enormously over the years to accommodate the needs of the *Drosophila* research community. Much of this growth stemmed from Kathy's intimate knowledge of the field and her ability to discern the kinds of stocks that would be valuable, and the BDSC is now an internationally recognized resource for biomedical research. She tried to collect as many representative mutant alleles of as many genes as possible, as well as accumulating chromosomal aberrations (principally deletions) that could be used to map and characterize those mutations. The representative allele collection was facilitated by a collaboration with the community-minded groups who were making transposon-induced mutations. She was instrumental in adding stocks that allow the facile creation of mosaics and sundry panels of fluorescent markers. In more recent years, she was supportive of the addition of stocks relevant to human disease. She also took a special interest in databases and computer science and was instrumental in integrating the use of databases for genotypic data. Most recently, she took on the task of completely revamping the BDSC database to make a more robust and accessible system for both BDSC staff and users.

The collection now contains nearly 68,000 stocks, and the BDSC distributed 218,429 samples worldwide in 2017. The staff has grown to five senior scientists, four research associates, and 50 part- and full-time stock keepers. Kathy oversaw all scientific and administrative functions and skillfully guided the center, supported first by NSF funding, later by a cooperative agreement between the NSF and NIH involving the introduction of user fees, and currently by an NIH subsidy.

Kathy was also one of the founders and directors of FlyBase, the primary international database service on the world wide web for genetic and genomic information regarding *Drosophila*. FlyBase is comprised of a consortium of *Drosophila* and computer scientists at IU, The University of Cambridge, UK and Harvard. Much like the BDSC, FlyBase has grown enormously both in content and scope. It evolved from a simple relational database of stock data with flat files provided *via* ftp into an interactive web-based database that provides query tools to access the data. With the addition of newer tools and larger data sets, FlyBase has evolved into the sophisticated research instrument and knowledgebase that we know today. Kathy was a strong guiding force through much of this development. It is safe to say that FlyBase has become an indispensable tool for the *Drosophila* research community, making the retrieval of information for designing experiments, writing papers and teaching much easier.

A good deal of these two powerful resources would not have been possible without the active, instrumental, knowledgeable, and selfless involvement of Kathy Matthews. Her contributions to the *Drosophila* research community have been numerous and exceedingly important. We could not do things the way we do them today without her hard work, dedication, and foresight. She was an enormous gift to our community and she will be missed. We are the better for her all too short presence amongst us, and we are the less for her passing.

This resolution will be presented in and become a part of the minutes of the Bloomington Faculty Council, and copies of the resolution will be sent to family members, friends, and colleagues after its presentation in the Council.

Thom Kaufman
Distinguished Professor
Department of Biology
Indiana University Bloomington