MURRAY F. BUELL AWARD

Murray F. Buell ascribed great importance to the participation of students at meetings and to excellence in the presentation of papers. To honor his dedication to the Ecological Society of America and to the younger generation of ecologists, this award is presented to a student for the outstanding oral paper presented at the Society’s annual meeting.

The winner of the Murray F. Buell award in 2003 is James Vonesh for his paper “Multi-predator effects across life-history stages: non-additivity of egg- and larval-stage predation in an African treefrog,” which is based on his doctoral research at the University of Florida; he will finish this fall under the supervision of Craig W. Osenberg. The Buell judges noted that James had conducted a well-designed experiment informed by field observations to examine whether the density- and size-mediated effects of early life-stage predators can significantly alter predator–prey interactions in later stages. He found that predator effects across stages were not independent, survival was greater than that predicted from the independent effects of predators, and both the density and size effects of early predators enhanced survival in later stages. James followed up this primary conclusion by addressing the unexpected result that smaller tadpoles had higher survival than larger tadpoles. To do this, he developed a simulation model parameterized with data from additional experiments that were designed to describe the functional form of density- and size-specific predation and growth rates of small/early hatched vs. large/later hatched tadpoles. Simulation results showed that the surprising pattern of survival observed in the principal experiment (i.e., small tadpoles did better) could have arisen via fairly simple mechanisms: compensatory growth in small tadpoles coupled with a hump-shaped pattern of size/density specific risk. Small/early hatched tadpoles grew more rapidly through the vulnerable size classes to achieve higher overall survival. James did an excellent job of introducing a complex topic to his audience; his methods were sound, his analyses were creative, and his conclusions were thorough. James’ work significantly enhances our understanding of trade-offs in predation risk across life history stages, and paves the way for better theoretical models based on empirical results. James received his M.S. from the University of Florida in 1998, and his B.S. in 1991 from Eckerd College in St. Petersburg, Florida.
The Thomas M. Frost Award was the director of the University of Wisconsin Trout Lake Station from 1981 until his death in 2000. His colleagues remember him as a dedicated and creative scientist who brought a gentle, caring humanity to our endeavors. To honor Tom’s commitments to aquatic ecology and to graduate student education, the Aquatic Section initiated the Thomas M. Frost Award for Excellence in Graduate Research in 2002. This award recognizes an outstanding paper resulting from research done as a graduate student.

E. LUCY BRAUN AWARD

E. Lucy Braun was an eminent plant ecologist and the first woman president of the Ecological Society of America. Besides describing and mapping the deciduous forest regions of eastern North America, Lucy Braun served as a dedicated teacher and role model to her students. To honor her, this award is presented to a student for the outstanding poster presentation at the Society’s Annual Meeting.

The 2003 winner of the E. Lucy Braun Award is Sean T. Michaletz for his poster “A process-based approach for predicting surface fire effects on trees,” based on his current master’s research at the University of Calgary under the supervision of Edward A. Johnson. The Braun judges were impressed with the complex design of Sean’s study, and with his clear explanation of how he used non-trivial mathematics to demonstrate that a detailed understanding of fire behavior and heat transfer is necessary for predicting postfire tree mortality. Sean used very effective illustrations in his poster, and he did a great job of identifying the biological implications of his research. This project explores new terrain, bringing fundamental concepts from engineering to ecology; it has considerable applied value. Sean received his B.A. in 2001 from Hamline University in St. Paul, Minnesota.

The Braun Award Selection Committee also gave an Honourable Mention to Lina Taneva for her poster, “Responses of forest soil respiration to elevated CO2: implications for soil carbon storage.” Lina is a student at the University of Illinois at Chicago.

Cynthia S. Kolar

The 2003 recipient of the Thomas M. Frost Award is Cynthia S. Kolar for her article “Ecological predictions and risk assessment for alien fishes in North America,” published with co-author David Lodge in Science 298:1233–1236. In this article, Kolar and Lodge tackled the complex challenge of forecasting biological invasions by decomposing the problem into manageable components of the process, then demonstrated that only a few variables are necessary in statistical models to explain most of the variation in success of fish invasions in the Great Lakes. Kolar’s approach to predicting invasions in the Great Lakes is notable for being both quantitative and transferable to many freshwater, marine, and terrestrial habitats and taxonomic groups. Her article has garnered substantial national and international attention from the scientific and management communities, as well as from the media. This paper is one of a series of articles on species invasions resulting from Dr. Kolar’s dissertation research done at the University of Notre Dame under the direction of David Lodge. She is currently putting her research to the test in her job as the Invasive Species Workgroup Leader for USGS’s Upper Midwest Environmental Sciences Center.

THOMAS M. FROST AWARD

Thomas M. Frost was the director of the University of Wisconsin Trout Lake Station from 1981 until his death in 2000. His colleagues remember him as a dedicated and creative scientist who brought a gentle, caring humanity to our endeavors. To honor Tom’s commitments to aquatic ecology and to graduate student education, the Aquatic Section initiated the Thomas M. Frost Award for Excellence in Graduate Research in 2002. This award recognizes an outstanding paper resulting from research done as a graduate student.