



## **In Memoriam**

### **Jesse E. Purdy**

Jesse E. Purdy, a consummate comparative psychologist whose research started with laboratory rats but quickly expanded to include garter snakes, Weddell seals, cuttlefish, killer whales, coho salmon, and numerous more common species of fish, passed away on April 16, 2018, after a long and heroic battle with cancer.

Purdy received his Ph.D. in 1978 from Colorado State University and was promptly hired on the faculty of Southwestern University in Georgetown, Texas, where he spent the rest of his academic career until his retirement in 2015. During his tenure at Southwestern, he served as Chair of the Psychology Department for 12 years (from 1989 to 2001) and was appointed the John H. Duncan Professor of Psychology (from 2004 to 2009) and the Brown Distinguished Research Professor (1998-2002). In pursuit of his passion for studying the behavior of aquatic animals, Purdy served as a visiting scientist at the Northwest and Alaska Fisheries Center in Seattle, WA, the National Marine Science Centre of Southern Cross University, NSW, Australia, and at McMurdo Station in McMurdo Sound in Antarctica (during two periods of study). His research on cuttlefish was the subject of a NOVA Science documentary on the Public Broadcasting System. His work on Weddell seals in Antarctica was the subject of a film (produced by Purdy and Randall Davis) which received the Film Award from the Animal Behaviour Society in 2008.

When Purdy first arrived at Southwestern University, his Dean asked him if he was willing to set up a human research laboratory. Always the optimist, Purdy agreed but his heart was not in the work and he soon started looking for ways to continue his research with nonhuman animals. Rats were out of the question because of the lack of facilities and the expense involved. Purdy searched for alternatives, even spending a summer studying honeybees in Hawaii with Jeff Bitterman. Fish seemed more promising. They were readily available, did not require specialized laboratory grade equipment, and did not trigger Purdy's allergies. Given those considerations, Purdy established the first comparative psychology laboratory at Southwestern University about 35 years ago. The laboratory was located in Mood-Bridwell Hall, which was not constructed with laboratories in mind, let alone a fish lab. One of the challenges was figuring out how to evacuate large quantities of water. Purdy quickly solved that problem by drilling a hole in the floor to fit a drainpipe that diverted the excess water under the building. In keeping with Purdy's motto to "ask for forgiveness rather than permission," my guess is that Purdy never cleared this solution with the facilities manager.

Over the years, Purdy's lab grew by taking over places that were in such disrepair that no one else wanted them. His lab became the showcase of the campus when it moved to the newly constructed F. W. Olin Building in 1996. Here his lab expanded to 1,800 square feet, with state of the art operant conditioning stations for goldfish and koi, a testing room for basic conditioning experiments with goldfish and bass, and facilities for housing and testing saltwater animals. This is where Purdy did his famous research on cuttlefish, a large-brained cephalopod. Purdy probably had the longest running laboratory for the study of learning in cuttlefish in North America and investigated a range of learning issues including habituation and sign tracking.

The investment that Southwestern University made to support Purdy's research is unprecedented at such a small liberal arts institution. Southwestern was willing to make this unusual and generous investment because they recognized Purdy's commitment to undergraduate research, and, more importantly, they witnessed the excitement that Purdy created in his students by involving them in research. Purdy looked for ways to involve undergraduates in research at every turn. In addition to having them work in his own lab, Purdy arranged to have his students work in various other laboratories. I was very fortunate to have some of those students join my lab at the University of Texas at Austin. Purdy also established a strong relationship with Steve Schapiro at the Michale E. Keeling Center for Comparative Medicine and Research of The University of Texas MD Anderson Cancer Center in Bastrop, TX. This provided students from Southwestern with unique opportunities to study the behavior of chimpanzees. No fewer than 40 students over the years studied the Keeling Center chimpanzees, resulting in numerous Capstone projects, conference presentations, and peer-reviewed publications. Several of those students went on to work at the Keeling Center and many still work in primate-related fields.

When he was promoted to Associate Professor, Purdy got a bit restless and obtained a research associate position through the National Research Council to study the effects of aromatic hydrocarbons on coho salmon at the Northwest and Alaska Fisheries Center. We usually think about pollutants disrupting wildlife through physiological toxicity. Purdy showed that aromatic hydrocarbons disrupt salmon by suppressing their eating behavior and by disrupting their ability to learn to avoid danger. In addition to providing interesting data, the trip to the Northwest and Alaska Fisheries Center started Purdy's love affair with the Pacific northwest and with observation of animals in their natural habitat.

The "king of the jungle" in the Pacific northwest is not the coho salmon but the killer whale (*Ocinus orca*). Purdy became fascinated with killer whales and the challenges of studying them in the wild and made a number of trips to record killer whale vocalizations and feeding behavior in the inter-coastal waterways of Vancouver Island. During the first of these trips, in 1989, Purdy took along a few students as well as his family. One of those students was Karen Roper. Commenting on the trip nearly 30 years later, Roper noted that on this trip Purdy "laid bare the awe and pure amazement that he had upon seeing a whale breach, or his wonderment about why they spyhop, migrate, or communicate. It was infectious. His deep curiosity and enthusiasm to inquire about the lives of animals reflected a joy for life itself." Roper subsequently earned a Ph.D. in psychology at the University of Kentucky and is currently the Research Director for the Division of Community Medicine at the University of Kentucky College of Medicine.

Subsequent trips to the northwest were increasingly more ambitious, with more students, a bigger inflatable boat, a larger outboard motor, and more camping and scientific equipment. Transporting all of this in trailers and vans became a logistical challenge. One of the challenges for Purdy was handling the weight of the new boat and outboard motor without hurting his back. Bob Morgan, a professor of Biology at Southwestern, accompanied Purdy on many of these trips. On a trip in 1991, they took 23 students and two boats. Part of the time they camped on an uninhabited island, where one of the boats capsized. After struggling in the freezing waters to retrieve the boat, Purdy and Morgan towed it to town for repairs, which wiped out the budget for the trip. Melissa Burns-Cusato, one of the students on the trip, recalls "That's when Jess suggested that we play poker. Over the next week, he won enough money from playing poker with us to get us all home, safe and sound." She adds: "It is that experience that taught me the importance of keeping one's sense of humor and persistence when faced with the challenges of teaching in a nontraditional location." With that sense of humor and persistence, Dr. Burns-Cusato frequently takes her students from Centre College to a primate research station in Barbados.

Purdy was not only a champion of comparative psychology on his home campus but also in the Texas and surrounding states. He was one of the founding members of the Southwest Comparative Psychology Association (SCPA) and served on the Governing Board of that association during its early years (1986-1988). He remained a fervent supporter of the organization and its annual conference, which was often held with the annual meeting of the Southwest Psychological Association (SWPA). Between the San Antonio SCPA meeting in 1983 and the 2012 meeting in Oklahoma City, Purdy and his students made 44 research presentations at SCPA, a record that few others matched.

SCPA had its roots in earlier efforts of comparative psychologists in the southwest to encourage and interest students in comparative psychology. These earlier champions included Gary Greenberg, Maury Harraway, Ernest Maples, and Steve Davis who arranged for formal symposia and paper presentations as well as receptions and other social activities at SWPA. My favorite meetings were when SCPA met with SWPA in Corpus Christi. This gave Purdy and I, along with other faculty and students, a chance to camp on the beach near Corpus Christi and share campfire dinners between days of meetings at the convention hotel. On one of these occasions, all of us participated in a birding trip along the Gulf coast. On another occasion, Purdy drove us in his 4-wheel jeep past the normal visitor areas of Padre Island to see more remote parts of the beach. We encountered more abandoned tires and refrigerators than wildlife, which was a sobering sight.

Trips to SCPA and other conferences provided Purdy with opportunities to visit new golf courses. He always invited students and other faculty to join him at the end of a conference for a round of golf. Purdy was an avid golfer until he started having problems with his neck and back. Unfortunately, these problems got progressively worse. The last time he and I shared a room at a conference (at the American Psychological Association convention in 2012), he was frequently forced to return to his room to lie down to rest his back. To correct his severe scoliosis, Purdy underwent a 13-hour surgical procedure in 2013 that repaired his back with a column of screws on each side of his vertebrae. He took medical leave to recover from that operation and then returned to teaching for one more year before his retirement in 2015.

Purdy's commitment to promoting comparative psychology was not limited to SCPA. He presented results of his research at other conferences including the Texas Academy of Sciences, the Winter Conference on Animal Learning, the International Conference on Comparative Cognition, and meetings of the American Psychological Association. He was also invited to speak at various colleges and universities in the U.S. and Australia, as well as the Bamfield Marine Station on Vancouver Island, Canada, and Sea World in San Antonio, Texas.

Purdy also helped to promote psychology more broadly through his service in the Southwest Psychological Association. He served as President of SWPA in 1999. One of the responsibilities of the president was to set the theme for the convention and organize the program for the annual meeting. Purdy used this opportunity to further promote comparative psychology by inviting half a dozen internationally recognized comparative psychologists to participate in a symposium. The participants included Tom Zentall, Ralph Miller, and Ed Wasserman, an unlikely group to convene at a regional meeting in New Mexico. Eleven years later, the President of SWPA was Scott Bailey, who got his start in psychology in a class taught by Purdy. Bailey noted recently that Purdy "was my advisor in college, and someone whose life and life work I could only hope to emulate."

Purdy worked hard to promote student success not just through his personal mentoring but also through his writing and other professional activities. He wrote articles on how animal research is taught in psychology courses, what makes for success in graduate school, and how undergraduate research promotes student

learning. He also became heavily involved with Psi Chi, the international honor society in psychology. Purdy served two terms as Vice-President of Psi Chi for the southwest region (from 1995 to 1998) and was then elected President. As President, Purdy wrote articles for the newsletter *Eye on Psi Chi* in which he described his research experiences in the Pacific northwest and his passion for the work that he was doing.

During the seven years that Purdy served on the Board of Directors of Psi Chi, he helped to create a Psi Chi research grant program and established a relationship between Psi Chi and NSF to support undergraduate research internships. Purdy was also instrumental in recasting the Executive Director position at Psi Chi from one that was primarily responsible for fiscal issues to a Ph.D. psychologist who could give Psi Chi an effective voice in coordinating with the American Psychological Association and other organizations in promoting education and research in psychology. Pete Giordano, who followed Purdy as President of Psi Chi, recently commented that “Psi Chi became much stronger and broader in its reach because of Jesse’s leadership.” Another of his colleagues at Psi Chi, Elizabeth Yost Hammer, commented that Purdy “could have easily have been a Dean or Provost but always kept his eyes on his prize – – working with undergraduates in his lab.”

Purdy was as supportive of new faculty at Southwestern as he was of the students who worked with him in the lab. With his vision, infectious enthusiasm, and talent for persuasion, Purdy increased the size of the psychology department at Southwestern from three to six faculty, with research laboratories for studying cutting edge questions in psychology with both human and nonhuman participants. An early hire was Traci Giuliano, a social psychologist who describes Purdy as a “mentor, role model, big brother, amazing colleague, and friend.” Subsequently, Fay Guarraci joined the department and set up a rat lab to study reproductive behavior and drugs of abuse. Fay noted that “Purdy was living breathing evidence that amazing research questions could be answered and international collaborations forged, while working at a small liberal arts and science institution in Central Texas, without the assistance of graduate students or post-doctoral fellows.” Comparative psychology lives on at Southwestern in Fay Gouarraci’s lab and in the work of Carin Perilloux, an evolutionary psychologist who joined the faculty most recently.

Purdy is survived by Karen, his wife of 45 years, and their two children, Kristopher and Matthew. He is also survived by his students and colleagues at Southwestern who came to share his vision and enthusiasm for a life of inquiry and adventure and will continue to share that with their own students for decades to come.

### **Acknowledgments**

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