

Companion Animals Symposium: Promoting Companion Animal Biology and Research in Animal Sciences

342 Reaching out: Opportunities for developing companion animal biology. C. L. Morris*, *Omaha's Henry Doorly Zoo, Omaha, NE.*

During the last century, Animal Science programs throughout the United States have provided outstanding leadership in scientific inquiry and education regarding livestock production. Changing demographics, including diversity of student populations in the past few decades, along with companion animal industry needs have highlighted the demand for advancement and development of Animal Science program opportunities. Along with demographic changes, career goals and interests of Animal Science students also have shifted. Fewer students are seeking traditional careers in livestock animal production and pursuing opportunities in the areas of genomics, companion animals, exotic animals, and specialized interests in topics including behavior and animal welfare. As the US population of pet dogs and cats exceed the number of children in households, and with more than 175 million guests visiting US zoological institutions annually, growing opportunities in the pet and exotic animal industries are on the rise. These animal industries are evolving rapidly in areas such as nutrition, education, behavioral husbandry and training, conservation, outreach, shelter management, and small business management. With growing demand of these industries seeking well-trained professionals, Animal Science departments are charged with developing curricula that appropriately train students for careers in these fields. Currently, few universities have the professional staff with the breadth of expertise to provide teaching and outreach opportunities to students seeking these career directions. These changes in student demographics and educational goals provide exceptional opportunities for Departments of Animal Sciences to promote outreach opportunities and advanced technology education transfer when teaching staff are limited. Therefore, the objectives of this symposium will be to explore the important role of teaching and outreach in the area of companion and exotic animal biology and to discuss potential opportunities to expand teaching, outreach, and research through alternative methodology and technology in academics to reach industry needs.

Key words: companion animals, exotic animals, teaching and outreach

343 Wants and needs: What students want may not be what the current comparative animal industry needs. K. D. Ange-van Heugten*, *North Carolina State University, Raleigh.*

Companion animals are the top commodity preference of study for incoming freshman (Fr) in many North American animal science (ANS) departments. For example, incoming ANS Fr at NCSU are surveyed yearly about their species preference and 2010 data (n = 120) indicate the following as their first preference: companion animal (58%), equine (29%), beef cattle (3%), dairy cattle (3%), marine mammal (2%), swine (2%), sheep (1%), goats and lab animal (0), other (2%). These freshmen were 83% female and 92% want to be a veterinarian. Similarly, when 2 2011 companion animal courses (1 Fr level, n = 120; 1 senior level, n = 51) were surveyed they indicated that the primary determinants for their career were as follows in decreasing order of preference: discipline area, daily work with animals, species specific work, salary, flexible hours, and location. Within the senior course, 92% of the students indicated that they want their future career

to involve companion or exotic species. The multibillion dollar companion and comparative animal industries need many specialists with the popular areas of veterinary medicine and behavior being minorities. Sources report the 10 most critical hiring criteria for employers as: communication, integrity, teamwork, interpersonal skills, work ethic, motivation, flexibility, analytical, computer, and organization skills. In contrast, students want: opportunity to advance, job security, benefits packages and friendly coworkers. In the current economy, job security, benefits and coworker choice are not reliable and many employers feel that new graduates lack communication, management and business etiquette skills. Thus, hiring agencies focus on personal skills and are less interested in species or veterinary preferences. Companion animal educators should emphasize that many vital comparative animal career paths exist in addition to veterinary or comparative species professions. In fact, work in other areas can be incredibly lucrative and vital for the industry. In addition, students need to sharpen their management skills while appreciating the critical difference between communicating with their peers and employers.

Key words: companion animal, education, industry

344 Cat and mouse: Utilizing technology and science to reach students. N. A. Dreschel*, *Pennsylvania State University, University Park.*

From simple applications such as blogs, video and the use of course management systems, to complete courses offered online, the availability of resources for companion animal instruction have increased tremendously. The benefits of using technology include improved student interaction, an ability to engage students with different learning styles, and an ability to reach nontraditional student audiences. An online general education animal science course examining the relationship of "Pets in Society" uses a variety of technologies to instruct both traditional, residential animal science students and non-traditional distance learners. Distance-learning students bring a wealth of experience and insight to an integrated course. Choosing appropriate and meaningful technology is important in instructional design. Examples of instructional techniques such as "rollover" animations, narrated PowerPoints, video interviews and online discussion forums will be presented. Technology used or created for online courses can also be transferred to in-class or "hybrid" courses, as well as to extension formats such as eXtension. Challenges in teaching with technology include the time needed to develop technology, faculty and student comfort with using technology, modifications of technology to meet the needs of students with disabilities, and institutional constraints on the ability to offer courses online. The variety of new technology available can be overwhelming; however, presents great opportunities for engaging and teaching students in both traditional and online environments.

Key words: teaching, technology, companion animals

345 Research and outreach: Blending the basic and the applied. L. K. Karr-Lilienthal*, *University of Nebraska-Lincoln, Lincoln.*

The opportunities to complete undergraduate research related to companion animals are limited. Assisting with traditional animal research projects can allow for students to develop a better appreciation for

how research is conducted and expand their interest in graduate school programs. However, universities with companion animal research programs are few. Opportunities to match students with industry partners to gain experiences are critical. Students may have opportunities to assist with research at pet food companies, zoos, or animal assisted therapy programs. Utilizing undergraduate students in community outreach programs provides an opportunity for students to develop critical skills required for employment, but also provides companion animal faculty with research opportunities. A variety of creative activities can be utilized to improve student learning and gain experiences outside of the classroom. Examples of successful programs include student organized dog training courses, service learning projects through humane societies or animal rescues, student involvement in feral cat control programs, and student assistance with spay/neuter programs. These activities can support student learning outcomes as well as provide a valuable community services. Measuring the impacts of these activities on student learning and life skills as well as community implications will be critical to evaluation of the success of the programs. Undergraduate research activities are a meaningful way to provide students with learning opportunities. Extension or outreach programs allow for opportunities for students to develop leadership skills. Undergraduate students serving as instructors in 4-H and other youth programs can provide both an impact on the education of the youth involved, but also develop a deeper understanding of materials to be taught. Undergraduate students can be involved in teaching health care, nutrition, and other topics related to companion animals to youth audiences. Utilizing classroom research can aid in more accurate assessment of program goals and the ability of the program to reach its learning outcomes.

Key words: undergraduate education, companion animals, outreach

346 Biodiversity is life: Teaching conservation biology with zoos and aquariums. R. L. Krisher*, *National Foundation for Fertility Research, Lone Tree, CO.*

Student interest in the conservation of exotic and endangered species is at an all-time high. In fact, more people visit zoological institutions each year than attend all professional sporting events combined. Increased access to video programming about exotic species, and improved access to travel abroad opportunities, has motivated many college students to become passionate about animal conservation as a career choice. Enrichment of traditional Animal Science academic programs with formal coursework to meaningfully fill this void and provide opportunities to Animal Science students in this area has been challenging. To fully understand the multifaceted, complex responsi-

bilities related to conservation of species, topics related to ecology, taxonomy, conservation biology, population genetics, physiology and management of exotic species in a captive setting must be addressed and integrated. Zoos are now an essential part of worldwide conservation strategies, and captive breeding programs are an integral part of this mission. Thus, in addition to fundamental responsibilities such as nutrition and veterinary care, zoos must address reproduction and even assisted reproduction in a directed way. Research conducted in zoos has played a meaningful role in advancing care and maintenance of captive species. Methods to exhibit these species have also improved dramatically, along with attention to environmental enrichment to enhance animal wellbeing and positively impact visitor experiences. However, the ethics of maintaining captive animals must always be explored and addressed. Finally, the public education mission and impact of zoos cannot be overstated. Overseeing all of these activities are worldwide and national organizations of significance. For students to understand and appreciate these many perspectives of a zoo operation, development of critical thinking skills is highly effective to achieve the course objectives; students that are able to speak and write intelligently on current topics pertaining to animal conservation, and students able to create and defend their own informed opinions on the modalities employed in captive animal holding and conservation.

347 The future of companion animal biology in academics. A. Fischer*, *University of Illinois, Urbana.*

As companion animal programs continue to become established components of Animal Sciences departments, the diversity of topics addressed will expand. Likely targets for growth include the fields of human-animal relationships, and applied companion animal welfare. Academic interest in human-animal relationships is growing, as evidenced by recent initiatives to promote research on the human-animal bond and to quantify the benefits of sharing our lives with companion animals. We can expect continued collaborations across a variety of disciplines, such as psychology, sociology, anthropology, and law. In the field of applied companion animal welfare, specifically in animal sheltering, we have seen an increase in data-driven initiatives aimed at increasing adoptions and decreasing euthanasia across the country. We can expect to see a continued integration of applied research in animal sheltering operations, and an increasing number of professional positions for our graduates in the areas of animal advocacy, policy, and management.

Key words: companion animal, academics, careers