## Behavior Research in Bear Rehabilitation in China

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Foundation, feeling that wasn't nearly enough, but all I could afford. That same semester, I mentioned AAF to a professor at my veterinary school and he told me about the Frontiers for Veterinary Medicine Program. I contacted AAF and explained that I was a veterinary student with the motivation and dedication to help develop a research project aimed at moving the goals of AAF forward.

After a year of careful planning and hard work, I submitted a proposal to the Geraldine R. Dodge Foundation for a research project entitled, "Behavioral Indicators of Stress in Asiatic Black Bears Undergoing Rehabilitation Following Use as Bile Donors." When I was contacted and informed that my project had been selected, I felt the award had been given

to everyone at AAF and all of the bears, too. This past summer I was so fortunate to travel to the AAF Bear Rescue Center in Mainland China and to spend a month learning about and recording both stereotypic and normal behaviors of Asiatic black bears rescued from the bile farms. The bears in the study were from three different groups: (1) recently arrived animals, (2) those in dens in the process of integration, and (3) those in established groups with access to an outdoor enclosure.

Stereotypic behavior is defined as behavior that is repetitive in form and apparently useless in function; it is often used as an indicator of stress and a measure of welfare in captive animals. The bears at the AAF Rescue Center did not pace as most zoo-housed animals are known to do—instead these bears demonstrated a stationary, repetitive "head sway" which is likely a modified stereotypy resulting from a history of being housed in

tiny cages. Observations of all three groups did show that this behavior decreased over time, and, in fact, during observational periods, the bears in the third group spent most of their time engaged in normal behavior: foraging, climbing, swimming, and playing or wrestling with each other. The project results are very promising and show a decrease in stressful behavior over time as the bears adjust to their new home at the AAF Bear Rescue Center.

This experience was so valuable, not just because I was able to give so much more to the bears, but because I was able to learn a great deal about the process of research, meet other veterinarians and veterinary technicians working internationally, travel and learn about another culture, and open my eyes to many more possibilities and opportunities in the field of veterinary medicine.

## Preliminary Assessment of Recent Spay-Neuter Legislation in Buncombe County, North Carolina

Courtney Pierce and Jennifer Reed Class of 2008 North Carolina State University College of Veterinary Medicine

\ olving the problem of pet overpopulation is no simple task, as it has become increasingly difficult to identify the factors contributing to pet overpopulation.<sup>1,2</sup> In an attempt to respond to a problem with a variety of etiologies, many shelters and humane groups have employed a multimodal approach to combat overpopulation, incorporating spay-neuter programs, educational outreach programs, and stricter county ordinances.<sup>2</sup> Of particular interest, and the subject of much debate, are laws governing the sterilization of animals. There seems to be promising evidence that spay-neuter incentive legislation is decreasing euthanasia rates in places such as King County, Washington; Denver, Colorado; and San Mateo, California.

In 2004, commissioners in Buncombe County, North Carolina, passed a strict spayneuter law requiring that any cat or dog over the age of 6 months be spayed or neutered or the owners must purchase a one-time unaltered animal permit. In 2005, the city of Asheville implemented a similar ordinance. Initial reports and subjective assessment of the ordinance by veterinarians and the animal welfare community were favorable.



Preliminary research shows that spay/neuter incentive legislation has helped reduce the number of animals entering shelters in Buncombe County, North Carolina.

With assistance from a Geraldine R. Dodge Foundation grant, we were able to investigate further the effects of this legislation by analyzing the following: animal intake data, euthanasia rates, adoption rates, number of spays and neuters, concurrent programs promoting pet depopulation, how the county and city were enforcing the ordinance, and its economic impact on the county and city budget.

Animal intake numbers and euthanasia numbers seem to be decreasing, especially for dogs, but we will not know if this is statistically significant until we collect the last remaining data sets at the end of December. Public recognition of the overpopulation problem, accessibility of a low-cost spayneuter program, previous advertising campaigns by the MIMI Foundation, and minimal cost of enforcement seem to be the driving factors in the apparent success of this

piece of legislation. Should future analysis show continued success in reducing pet overpopulation in this area, we hope other counties will adopt similar policies, tailoring it to their county's needs.

## References

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- 2. Salman, M.D., et al. Human and Animal Factors Related to the Relinquishment of Dogs and Cats in 12 Selected Animal Shelters in the United States. *Journal of Applied Animal Welfare Science*, 1(3), 207-226. July 1998.

Editor's note: AVAR is currently working on similar legislation for Sacramento County, California, which would limit breeding to those who purchase a high unaltered license fee for the animal. Sacramento County has one of the worst kill rates in California, with nearly one out of every two animals who enter the shelter never leaving alive. AVAR also has plans to work with other California counties to enact similar legislation. For a copy of the model spay/neuter ordinance, email pam@avar.org.

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