



CALIFORNIA STATE SCIENCE FAIR 2015 PROJECT SUMMARY

Name(s) Matt J. Wallin	Project Number 35923
Project Title Rascally Rabbits: Social Behavior in Domestic Adult Male Dwarf Rabbits	
Objectives/Goals Little is known about the social behavior of domesticated male and female rabbits nor the best way to house them. I investigated whether male rabbits change their dominance behaviors based on interactions with the males and females near them. My first hypothesis was that the presence of a female will increase the dominance displays between all male rabbit pairs. My second hypothesis was that rabbits who were friends would show fewer displays of dominance than rabbits who were strangers. Abstract Little is known about the social behavior of domesticated male and female rabbits nor the best way to house them. I investigated whether male rabbits change their dominance behaviors based on interactions with the males and females near them. My first hypothesis was that the presence of a female will increase the dominance displays between all male rabbit pairs. My second hypothesis was that rabbits who were friends would show fewer displays of dominance than rabbits who were strangers. Methods/Materials I have hand-raised and trained 12 rabbits over the last 8 months in my home. The male rabbits have been housed together or next to each other as friends or separately with little contact. I put the six pairs of male rabbits who were friends or six pairs of male rabbits who were strangers in a divided pen and recorded how many times each pair showed signs of dominance with and without the presence of a female over two minute trials. I used a Student's t-test to compare the difference in dominance displays between several conditions: 1) all male rabbit pairs with and without a female present; 2) friendly male rabbit pairs with and without a female present; 3) stranger male rabbit pairs with and without a female present; 4) friendly vs. stranger rabbits with a female present; and 5) friendly and stranger rabbits without a female present. Results Contrary to my first hypothesis, the presence of a female rabbit actually significantly decreased the dominance displays between male rabbit pairs in general ($p < 0.05$). This effect was driven by the high level of dominance displays between strange male rabbit pairs compared to that of friendly rabbit pairs. Confirming my second hypothesis, the friendly rabbits did not change their rate of dominance displays when a female was present, but the stranger rabbits reduced their displays of dominance and increased their courtship displays toward the female. Conclusions/Discussion Thus, I conclude that it would be best to house stranger male rabbits with their friends and with females, because this arrangement decreases fighting among stranger rabbits until they become friends with one another. These findings will help domestic rabbit owners and farmers improve their designs for housing their rabbits to reduce stress.	
Summary Statement Social behavior in domestic adult male dwarf rabbits is affected by male familiarity and female proximity.	
Help Received My mom (Dr. Brewer) and friend (Dr. Barton) helped with experimental design and statistical training. My sister was a backup data collector, and my mom videotaped data collection.	