

## **Interim Report on the Panda Project**

November 4, 2003

Here it is November already, and just about a year since I began writing about my work with Panda, my miniature horse guide. Since it has been quite a while since my last report, I thought this might be a good time to write an update on the progress of the Panda Project. When I last wrote on this subject in the spring, Panda was still in training with Alexandra Kurland. Panda had begun to spend some weekends and school vacations at my house, and we had done some training walks together. But Panda still looked to Alex as her teacher and leader. Over the summer and now into the fall, Panda and I have become a real working guide team, and that is a marvelous feeling which I have greatly missed for the past three years! So here is my interim report on Panda and where we stand at this point in time.

During this past summer, Panda came to live at my house full time, and we began working together on a regular basis. At first Alex accompanied us on our walks to make sure that all went well. But soon we were traveling solo and loving the freedom and independence that gave us. Panda and I have come together as a team and have gained confidence in each other, so that it now feels as if we have always been partners. The communication between us flows smoothly, and our bodies move in unison and react automatically to small changes and subtle cues from the other. When we are moving fluidly down the sidewalk or hallway, we feel free and confident. This is, of course, exactly what the relationship between a blind traveler and a well-trained and well-matched guide animal is supposed to be. So I think we can state unequivocally that the Panda Project has been successful in demonstrating that a miniature horse can be trained to work as a guide for a blind person. Below I will give a more detailed description of the behaviors and tasks which Panda has learned to perform, the preliminary answers she has provided to some of our questions about horses as guides, and the questions which remain to be investigated.

The behaviors required of any guide animal for the blind can be divided into two major categories: Formal Guide Work; and Manners, or behaviors necessary for living in the human environment. A high degree of mastery is necessary in both areas, for no matter how good an animal is at the actual guide work, if it cannot maintain socially acceptable behavior in public places as well as at home, and if it is not flexible and adaptable enough physically and emotionally, it will limit rather than enhance the independence and mobility of the blind person.

The tasks of Formal Guide Work which Panda has mastered to date are:

- Accepting the harness
- Leading out in harness
- Maintaining a straight line down a sidewalk or corridor
- Maintaining an appropriate pace for the conditions

- Responding to requests for changes of pace (forward, steady, hup-up, whoa)
- Responding to requests for changes of direction (right, left, come about, back)
- Finding suggested "right", "left", "inside", "outside"
- Avoiding obstacles (stationary, moving, overhead)
- Stopping at changes of elevation (curbs, steps, cracks in the sidewalk, tree roots)
- Walking up and down stairs at an even pace
- Avoiding or indicating possibly dangerous footing, such as ice, puddles, or mud
- "Finding" and indicating landmarks, such as door handles, curbs, steps, elevators, audible pedestrian traffic signal buttons, trash cans, seats, the car
- Working through doorways and other narrow spaces
- Retrieving dropped objects
- Staying close to the left edge of roads without sidewalks, and returning to the edge after navigating around obstacles
- Judging the safety of street crossings and refusing to go forward if safety is in question
- Crossing straight to the opposite curb
- Avoiding vehicles pulling in or out of driveways, parking lots, side streets, etc.
- Avoiding "drop-offs", such as train platform edges or loading dock edges
- Following a designated person
- Waiting patiently while her handler is engaged in non-travel activity, such as working or dining
- Staying focused on task in the face of distractions, including food, other animals, and human attention

Wow! Isn't it amazing how many things Panda has learned to do so proficiently in less than two years? We can debate as to how much of this success is due to the intelligence and trainability of miniature horses in general and of Panda in particular, and how much is due to the power of Clicker Training as a teaching method. But I don't think there is any doubt that Panda performs her job with a high degree of competence, and with a happy and confident attitude. In my judgment, Panda performs the above listed tasks at least as well as the best performing guide dogs.

There remain a few tasks of Formal Guide Work in which we have not yet sufficiently trained Panda to evaluate her performance. These remaining tasks are:

- Walking up and down narrow, possibly slippery, indoor stairs
- Boarding and riding public transportation vehicles, such as busses, trains, subways, planes, and taxis
- Exercising "intelligent disobedience" in instances where the safety of the team is in jeopardy, such as in heavy traffic during street crossings
- Working on special elements in the environment, such as escalators and revolving doors

In the category of Manners or tasks related to living in the human-built environment, Panda has achieved high marks on the following tasks:

- Responding correctly to basic obedience requests, such as "come", "heel" (walk on a loose lead at the left side of her handler), "stand", "stay"
- Accepting grooming and tactual contact on all parts of her body
- Respecting the space of humans and tolerating human patting and touching, even by strangers
- Relieving on cue in appropriate locations
- Indicating when a relief break is needed and waiting until an opportunity to relieve is offered
- Playing with or mouthing only appropriate objects and "leaving" other objects alone
- Standing on a tie for extended periods of time (about 2 hours)
- Eating, drinking, resting, and relieving in unfamiliar places as appropriate
- Tolerating being separated from her handler and left alone in a stall or on a tie

Behaviors in the category of Manners which we have not yet investigated sufficiently to evaluate are:

- Going without a relief break for extended periods of time, such as during long trips on public transportation lasting more than two or three hours.
- Staying overnight in hotels or other unfamiliar indoor locations

Panda has answered many of the questions we had when we undertook this project. She has shown that horses are intelligent and trainable enough to learn the tasks of guide work. She has also demonstrated that horses have the stable temperament and emotional flexibility to thrive in the stressful human-built environment. She has shown that horses can present a businesslike and professional appearance in public, and can maintain socially acceptable behavior, so that a guide horse truly enhances the independence, mobility, and dignity of the blind handler. She has provided strong evidence that she can adapt to the ever-changing schedules, working conditions, and living arrangements which characterize the contemporary human lifestyle. And she has demonstrated a true enthusiasm and real joy in performing guide work in partnership with her blind handler.

Furthermore, Panda has given strong evidence that even highly demanding complexes of behavior, such as guide work, can be trained using the positive techniques of applied operant conditioning, Clicker Training. Panda's training has relied heavily on the use of positive reinforcement of desired behaviors, and has avoided the use of physical "corrections" and aversives. When an error occurs, Panda is "reset", that is, she is asked to back up or perform some other behavior which will put her in a position to rework the problem situation. Then she is given the opportunity to rework the situation and praised and reinforced for the correct response. In this way Panda does not develop anxiety about tricky or unfamiliar working situations, and does not develop stress or patterns of avoidance behavior when in doubt about the best course of action. The positive methods of Clicker Training have fostered Panda's development as a confident and joyful guide and companion.

The Panda Project is by no means completed. The final decision as to whether I will choose to work with a miniature horse guide for the next thirty years will depend, to a large extent, on the answers to the questions related to Panda's performance on the remaining tasks of both Formal Guide Work and Manners. My conclusion at this point in the process, however, is emphatically that Panda is a delightful companion and a fully competent and dependable working guide. It is a joy to travel with her, and I can completely rely on our effective communication and joint decisions to get us to our travel destinations safely and efficiently.

The success of this project has been brought about by the dedicated and unstinting training effort of Alexandra Kurland and by the willing and eager engagement of Panda. Alex has been patient with my doubts and understanding of my reservations, and shown me that we are limited only by the boundaries of our vision and creativity. Panda has risen to the challenge of each new predicament and adventure, with a matter-of-fact acceptance and confidence. Without the hard work and indomitable spirit of both of them this endeavor would have been impossible, and I am forever grateful to both Alex and Panda for being the wonderful and positive individuals that they are. The journey so far has been enlightening and joyous. It has taught me much about myself and revealed much about the power of positive training methods and about the nature and spirit of horses. I look forward to continuing the journey, and to sharing with everyone the excitement of the adventure.