Novel Housing Alternatives for Group-Housed Ferrets
Jenna Hargens, BS, RLATG; April Yancy, DVM, MPH; Jan Gnadt, DVM, DACLAM
Division of Comparative Medicine, Georgetown University Medical Center, Washington, DC

Abstract
Ferrets require escape-proof, enriched housing that allows social interaction and normal behavior. Based on the Guide for the Care and Use of Laboratory Animals and AWR space requirements for cats, we devised a modified tank enclosure to house up to three adult ferrets. We hypothesized that the ferrets would exhibit normal social and physical behavior in the escape-proof enclosure. The tank contained thick correct bedding, a hammock, PVC tubes, a hut, and toys. We observed 2 to 3 ferrets for 15-minute intervals in the morning and evening (116.5 hours) for 2 days. ACHVA and correlation analysis determined the average time spent in three categories (general activities, interactions with structural items and toy items) and the association between key activities and enrichment items. During an average 15-minute interval, the ferrets slept 6.8 minutes (4%, p < 0.001); explored the environment – 6 minutes (40%, p < 0.001); played with each other or with toys – 1.8 minutes (12%); and performed other activities (eating, climbing, etc.) – 0.6 minutes (4%). The ferrets interacted significantly with the hut (p < 0.01) and often slept in these rooms. The ferrets routinely explored the bedding and cage areas. Rotating toys provided novel enrichment, new scents and textures. However, the ferrets rarely played with the toys except at first introduction.

Materials

Methods and Results

Study Design:
• Male ferrets (n = 2 or 3 per observation).
• Daily observation: AM and PM for 2 months – 64 fifteen minute intervals per ferret (116.5 hrs, 192 events).

Results:
Average Minutes per Observation Period

Activity Sleep Bedding Hut Toy
AM 6.1 8.4 4.1 2.2
PM 6.6 8.3 5.1 2.6

Conclusions

We determined activity levels and preference for various enrichment items for group-housed ferrets in a modified tank environment. The ferrets showed normal interactions, play and exploring/foraging behavior. The data indicates that ferrets need structures for sleeping (hut and PVC tubes) and play (hammock and the cylinder). The ferrets explored their surroundings almost as much as they slept. Rotating toys provided novel enrichment, new scents and textures. However, the ferrets rarely played with the toys except upon first introduction.

The modified tank offered several advantages over single-housing cat condo units:
1. The large floor space provided greater areas for enrichment items and exploring.
2. Physical contact with cage mates provided social enrichment.
3. The large lid enabled the daily observation and access to ferrets.
4. The smooth interior walls prevented injuries and the cage latches prevented escapes.
5. The food and water remained unshared since access was above floor level.
6. Materials and hardware were readily available and cost effective.

Smith reported hind limb and other skeletal changes in ferrets housed in cages that restrict movement. Isolation induced effects on behavior, such as deprivation of physical activity and group social play, cause hyperactivity that persists into adulthood. Our ferrets played with each other and interacted with the enrichment device and displayed no signs of behavioral abnormalities, pain or distress.

Strasbe reported zinc toxicity (fatal nephrosis) in ferrets due to animals licking raw meat: diets of the bars and walls of damaged wire cages. All of these cage surfaces were coated with a white, zinc-laden powder (2400 ppm) that formed as a result of steam sterilization at 82.2°C (180°F) for 20 minutes. No signs of toxicity developed in ferrets housed in the study tank. However, to avoid damaging the tank, a non-acid detergent (Amona 128, Quip Labs, Wilmingtom, DE) was used for 20 minutes, followed by a 10 minute water rinse at 180°F. Staff used an air blower to dry the tank and inspected the tank frequently for pitting, rust or damage.

Discussion

We hypothesized that three adult ferrets would exhibit normal physical and social behavior in the escape proof, modified tank enclosure.

Hypothesis

We hypothesized that three adult ferrets would exhibit normal physical and social behavior in the escape proof, modified tank enclosure.

Groups housed ferrets interacted well with each other and fully utilized the extra space, bedding, PVC pipes, hammock and hut. Ferrets primarily slept and explored their environment. Rotating toys provided novel enrichment, new scents and textures. However, the animals rarely played with the toys except upon first introduction.

References

Acknowledgments: Shawn Rouxseau, BS, RLATG, ILAM, Charles Dornal