

INFLUENCE OF BAIT ON ASSESSMENT OF BIODIVERSITY OF SMALL
MAMMALS

Except where reference is made to the work of others, the work described in this thesis is my own or was done in collaboration with my advisory committee. This thesis does not include proprietary or classified information.

Vikki Alexis Ashe

Certificate of Approval:

Robert S. Lishak
Associate Professor
Biological Sciences

Mary T. Mendonça, Chair
Associate Professor
Biological Sciences

David S. Shannon
Professor
Educational Foundations,
Leadership, and Technology

George T. Flowers
Interim Dean
Graduate School

INFLUENCE OF BAIT ON ASSESSMENT OF BIODIVERSITY OF SMALL
MAMMALS

Vikki Alexis Ashe

A Thesis

Submitted to

the Graduate Faculty of

Auburn University

in Partial Fulfillment of the

Requirements for the

Degree of

Master of Science

Auburn, Alabama
May 10, 2007

INFLUENCE OF BAIT ON ASSESSMENT OF BIODIVERSITY OF SMALL
MAMMALS

Vikki Alexis Ashe

Permission is granted to Auburn University to make copies of this thesis at its discretion, upon request of individuals or institutions and at their expense. The author reserves all publication rights.

Signature of Author

Date of Graduation

VITA

Vikki Alexis Ashe, daughter of Michael Glenn Ashe and Sharon Darlene (Barnhart) Ashe was born 24 October 1979 in Hampton, Virginia. She graduated from Bethel High School, Hampton, Virginia, with Honors in June 1997. She received a Bachelor of Science in Biology from Christopher Newport University, Newport News, Virginia in May 2002. She began graduate school at Auburn University in August 2002. While attending, she worked as a Graduate Teaching Assistant in the Department of Biological Sciences. During summer 2003, she worked as an independent contractor for the United States Geological Survey in Albuquerque, New Mexico. In May 2006, she received a National Science Foundation fellowship in the GK-12 Program, where she worked in biology classes at Loachapoka High School in Alabama. On 3 June 2006, she married John Dorland Peterson, son of Harold Christopher Peterson and Debra Lynn (Frazier) Peterson, in Hampton, Virginia.

THESIS ABSTRACT

INFLUENCE OF BAIT ON ASSESSMENT OF BIODIVERSITY OF SMALL
MAMMALS

Vikki Alexis Ashe

Master of Science, May 10, 2007
(B.S., Christopher Newport University, 2002)

91 Typed Pages

Directed by Mary T. Mendonça

Two experiments were designed to test effectiveness of bait packs containing peanut butter and rolled oats (peanut butter bait packs) compared to empty bait packs in traps used to capture small mammals. In experiment A, traps were set in pairs at each trap station: one trap contained a peanut butter bait pack and the other trap contained an empty bait pack. In experiment B, 2 independent lines of traps were set. All traps in 1 line contained peanut butter bait packs, and all traps in the second line contained empty bait packs. Effectiveness was measured by comparing success of capture for each baiting scheme for each experiment. Results are reported for the 5 most commonly captured species. The deer mouse (*Peromyscus maniculatus*), Bailey's pocket mouse (*Chaetodipus baileyi*), long-tailed vole (*Microtus longicaudus*), and southern grasshopper

mouse (*Onychomys torridus*) were captured equally as often in traps with peanut butter bait packs as traps with empty bait packs in both experiments during summer. During summer 2003, Merriam's kangaroo rat (*Dipodomys merriami*) demonstrated an aversion to traps with peanut butter bait packs when given a choice (experiment A), but was captured equally as often in traps with peanut butter bait packs as traps with empty bait packs when not given a choice (experiment B). During winter 2004, no significant differences were observed in capture success for either baiting scheme in either experiment for *D. merriami*. My data suggest that peanut butter bait packs do not increase success of capture when trapping *P. maniculatus*, *C. baileyi*, *M. longicaudus*, or *O. torridus*.

ACKNOWLEDGMENTS

I graciously thank my parents, Mike and Sheri Ashe for love and support in all my endeavors big and small. I also thank my brother, David Ashe, for love and support. I thank my grandparents, Kelly and Cornelia Ashe, who, without their help, I would never have made it to Auburn University. Thank you for your love and support, I miss you so much. I also thank Chris and Debra Peterson for advice, support, love and encouragement.

I thank my committee: Mary T. Mendonça, Robert S. Lishak, and David M. Shannon for much needed advice and support along this bumpy road. I thank Russell A. Benedict for cultivating my interest in biology and research. I also sincerely thank many friends: John Hunt, Paul Moosman, Jeremy White, Michelle Gilley, Kerri White, Matt, Amy, Xander and Luc Grilliot, and Amy Skibiell for your love and support along the way! I thank Troy L. Best and Christine A. Sundermann for advice and revisions. I thank Keith Geluso, Jeremy White, and Justin Hoffman for field assistance above and beyond the call of duty. I also thank Ken and Marianne Geluso for guidance during early stages of this project. I thank Mike Bogan for the opportunity and funding to conduct my research on his time. I thank Haley Brogden for her hard work and assistance.

Most of all, I thank my husband John Peterson. He has offered unconditional love, support, encouragement, technical, and field assistance. He listened when I needed to talk, and gave me guidance when I didn't know what to say. Thank you, John.

Style manual or journal used: This thesis was typed using the format of the *Journal of Mammalogy*.

Computer software used: This thesis was typed using Microsoft Word 2000. Statistics were computed with SPSS 12.0 for Windows.

TABLE OF CONTENTS

LIST OF TABLES	xi
LIST OF FIGURES	xii
INTRODUCTION	1
MATERIALS AND METHODS	8
Study Sites	8
Bait	9
Experimental Design	11
Data Analysis	12
RESULTS	14
Summer	14
Winter	15
DISCUSSION	16
Summer-Experiment A	16
Summer-Experiment B	20
Winter-Experiments A and B	21
PRACTICAL IMPLICATIONS	23
LITERATURE CITED	24
APPENDIX 1	40
APPENDIX 2	52

APPENDIX 3	67
APPENDIX 4	71

LIST OF TABLES

TABLE 1.....30

LIST OF FIGURES

FIGURE 1	31
FIGURE 2	32
FIGURE 3	33
FIGURE 4	34

INTRODUCTION

Baits can be used to attract animals from a great diversity of taxa for various purposes (Braun 2005). They can be used as means for vertebrate (Jacob et al. 2004 and Weihong et al. 1999) and invertebrate pest control (Buczowski et al. 2001; Karr et al. 2004; Michaud 2003; Schroder et al. 2001), recreational purposes, such as fishing (Vabø et al. 2004), or to attract animals for scientific research (Benedict 1999; Cabanac 1999; Fuertes et al. 2002; Jones et al. 2003; Manville et al. 1992; Reebbs et al. 1995). Baits also can be used to administer vaccinations (Creekmore et al. 2002; Steelman et al. 1998) and fertility control (Pech et al. 1997). The use of appropriate baits is important when attempting to attract certain species into traps (Braun 2005; Sivaprakasam and Durairaj 1995; Szocs et al. 2004). Several factors may influence selection of bait by different species including diet (Frank 1988), olfactory sensitivity (Vander Wall et al. 2003), and learned feeding behavior (Altshuler and Nunn 2001).

There are three principal means by which behaviors for selection of food are acquired in animals; instinctive or genetic predispositions, prenatal or maternal effects, and learned behaviors (Galef 1995). Little is known about predispositions of selection of food by animals, which include unlearned, reflexive reactions to certain tastes and neophobic rejection of new foods (Birch 1999). When given a choice, young Norway rats (*Rattus norvegicus*) selected sweet food items more often than bitter or sour food items soon after birth, prior to learning (Blass and Fitzgerald 1988). Neophobia,

generally accepted as instinctive avoidance of novel foods, is observed commonly in animals (Forbes 1998). Wong and McBride (1993) observed neophobia in Mongolian gerbils (*Meriones unguiculatus*) and golden hamsters (*Mesocricetus auratus*) in the laboratory when the animals were offered a choice of a familiar, unflavored peanut or a peanut flavored with basic, yet novel, flavors such as sweet, sour, bitter, or salty. Similarly, wild *R. norvegicus* has been observed to wait as long as 5 days before sampling novel food, although it was the only food available (Barnett, 1958; Galef, 1970). Prenatal and maternal effects influence selection of food by young based on diet of the mother during pregnancy and during lactation, respectively (Galef 1996). Hepper (1988) demonstrated that young *R. norvegicus* whose mothers were fed garlic during pregnancy selected garlic-containing food over food containing onion at weaning, whereas control rats showed no discrimination between the two. Young *R. norvegicus* that was made ill immediately after being fed by lactating mothers on a distinctly flavored diet showed aversion to that flavor at weaning (Galef and Sherry 1973). Galef and Henderson (1972) reported that young *R. norvegicus* showed increased partiality for food similar in taste to the diet of a nursing mother when compared to rats whose mothers did not give them milk.

While all of the preceding factors contribute to selection of diet, it is widely believed that the major force driving behaviors relating to selection of food by animals is learned, either individually or socially. Animals learn how to select food individually by trial and error, which results in positive or negative association with these foods (Forbes and Kyriazakis 1995). Turro et al. (1994) exposed juvenile chickens (*Gallus domesticus*) to a novel scent (orange) that was followed by an injection of either saline (control) or

lithium chloride, which caused sickness. They determined that juvenile chickens injected with lithium chloride after exposure to orange-scented foods avoided foods with the scent of orange significantly more than control juvenile chickens that were not injected with lithium chloride. These authors asserted that, at 2-3 days post hatching, juvenile chickens are able to learn negative associations to foods and make future selections accordingly.

Social experiences also present many opportunities for learning (Altshuler and Nunn 2001). Interactions with adults have a significant influence on selection of food by young animals (Cadieu and Cadieu 1998, Galef and Laland 2005). Galef and Clark (1971) determined that the physical presence of an adult *R. norvegicus* at a feeding site made that site attractive to young rats of the same species, and markedly increased the probability that the young would eat whatever food was found there. Even residual odor left by an adult *R. norvegicus* where it was feeding was sufficient to cause a young Norway rat to eat there (Galef and Beck 1985). Wyrwicka (1978, 1981) used rewarding electrical stimulation to train mother domestic cats (*Felis catus*) to eat foods not typically included in their diets, such as bananas (*Musa*). After weaning her young, the young cats began eating foods that the mother ate, including bananas. These young cats showed a partiality for bananas that young cats weaned from mothers in the control group, who were not trained to eat bananas, did not. Social learning does not only teach young animals which foods to eat, but some species have the ability to learn which foods not to eat. Mason et al. (1984) demonstrated “observer,” or naive red-winged blackbirds (*Agelaius phoeniceus*) and common grackles (*Quiscalus quiscula*), watched “model” *A. phoeniceus* and *Q. quiscula* (that were trained to eat specific foods) eat toxic berries and become sick and then avoided those berries themselves (Mason et al. 1984). In contrast,

naive *R. norvegicus* interacted with conspecifics that had eaten a novel food and become either violently ill or unconscious and still showed a propensity for the food the sick individual ate instead of an aversion to it as expected (Galef et al. 1983, 1990; Grover et al. 1988).

Regardless of how animals acquire behaviors by which they select food, they must use their senses of vision, olfaction, and taste to recognize foods (Forbes 1998). Which sense is most heavily relied on is specific to each group of animals. Passerine birds, for example, depend almost exclusively on sight and, more specifically, color for recognition of foods (Schaefer and Schmidt 2004). Color of fruit acts as a signal, divulging information about macronutrient content (Schmidt and Schaefer 2004).

Olfaction plays an important role in foraging behavior of small mammals; however, little is known about the varying olfactory abilities of different species of rodents (Howard et al. 1968; Vander Wall et al. 2003). Rodents use odors to find seeds in plant litter, vegetation, and soil after dispersal from plants (Howard and Cole 1967; Howard et al. 1968; Johnson and Jorgensen 1981) and to detect their own seeds or to pilfer seed caches (Daly et al. 1992; Pyare and Longland 2000; Vander Wall 1991; Vander Wall 2000). Given that rodents rely heavily on olfaction while foraging, the use of aromatic baits may significantly influence success of capture while trapping (Patric 1970; Woodman et al. 1996).

The success of most animal-trapping expeditions depends on use of suitable bait or baits to attract animals into traps (Patric 1970; Braun 2005). Scent is the primary characteristic of baits relied on to lure animals (Lindzey et al. 1977; Pedersen 1977). Native and commercial foods, artificial and natural lures, as well as artificially prepared

scents are common types of baits used when trapping for large and small mammals (Braun 2005). Because there is no universal bait known to be successful in attracting all species, biologists have tested an extensive list of baits and combinations of baits to determine which are most effective for their purposes. Examples of these include: peanut butter, cheese, rolled oats, raisins, ground beef, bacon (Patric 1970), suet, millet, grain sorghum, cracked corn, vanilla, a mixture of peanut butter and rolled oats (Woodman et al. 1996), bird seeds, apples, vegetables, walnuts, pieces of earthworms or mealworms, sweet potatoes (Lee 1997), rodent chow (Creekmore et al. 1998), chocolate, soap, wax, oiled wood (Weihong et al. 1999), pineapples, codfish oil, and bananas (Vieira et al. 2004).

Beer (1964) tested the effectiveness of 12 baits and mixtures of baits including peanut butter, bacon, rolled oats, limburger cheese, ground raisins, berry jam, raw hamburger, canned sardines, anise oil, and walnut meats, a mixture of peanut butter and rolled oats, and a mixture of peanut butter, rolled oats, ground raisins, and bacon fat. During >10,000 trap nights, he captured 1,506 individuals of 11 species from Minnesota during the snow-free period of the year. He determined a mixture of peanut butter and rolled oats was the most effective bait to trap small mammals. Probably due to its aromatic properties, peanut butter was a popular bait used by mammalogists in snap traps (Anderson and Ohmart 1977; Getz and Prather 1975; Johnson 1969), and still remains a commonly used bait in live traps (Benedict 1999; Moors 1985).

Although many researchers use baits containing peanut butter during trapping, some also have noted disadvantages to using peanut butter (Creekmore et al. 1998). Peanut butter, paired with any type of bait (e.g., seeds, rolled oats), can be impractical

and messy if applied without being contained in some manner (Creekmore et al. 1998). Other disadvantages include increased cost and time of preparation of baits and the attraction of invertebrates to traps, especially ants, which can be harmful to small mammals (Mitchell et al. 1996). Since their introduction in the 1930s, red imported fire ants (*Solenopsis invicta*) have had detrimental impacts on native fauna, including small mammals (Morrison et al. 2004). Researchers have experienced loss of bait and mutilation of animals captured in live traps as a result of these ants (Flickinger 1989; Masser and Grant 1986).

Another potential disadvantage is that peanut butter is high in protein, which requires more water to metabolize than foods lower in protein (Frank 1988). Animals inhabiting arid locations, such as deserts, maintain a more sensitive water balance than those in temperate regions. Since they do not drink free water (MacMillen 1983), the quandary faced by many small mammals is not obtaining water, but rather conserving it. Keeping this in mind, I hypothesized that small mammals in arid habitats would avoid baits containing peanut butter because of their potentially dehydrating effects, whereas small mammals in non-arid habitats would likely show indifference or a preference for baits containing peanut butter. I also considered protein consumption in the normal diet of each species when forming hypotheses about bait selection. For example, although the southern grasshopper mouse (*Onychomys torridus*) is a desert-dwelling species, it feeds predominately on insects and other small mammals, which are high in protein. Therefore, I predicted that *O. torridus* would be captured more often in traps with bait packs containing peanut butter and rolled oats than in traps with empty bait packs. Because *Dipodomys merriami* and *Chaetodipus baileyi* are both desert-dwelling

granivorous rodents, I predicted that they would avoid traps with bait packs containing peanut butter and rolled oats. *Peromyscus maniculatus* and *Microtus longicaudus* both inhabit non-arid habitats, therefore, I predicted they would be caught equally as often in traps with bait packs containing peanut butter and rolled oats as traps with empty bait packs. I realized that some captures would have nothing to do with the presence or absence of bait, but rather the individuals were seeking refuge, or entered the trap simply by chance. My intention was to capture animals in sufficient numbers to compensate for such events.

MATERIALS AND METHODS

Study sites.---Data collected during summer 2003 were from 4 locations in New Mexico and 1 location in Arizona (Appendices 1-2). Study sites in Bandelier National Monument (Los Alamos and Sandoval counties, New Mexico) were predominantly mixed coniferous forests [quaking aspen (*Populus tremuloides*), white fir (*Abies concolor*), Douglas fir (*Pseudotsuga menziesii*), limber pine (*Pinus flexilis*), red currant (*Ribes sativum*), and cliff fendler Bush (*Fendlera rupicola*)], ponderosa pine forests (*Pinus ponderosa*), piñon juniper woodlands [one-seeded juniper (*Juniperus monosperma*), singleleaf piñon pine (*Pinus monophylla*), Gambel oak (*Quercus gambelii*), and Apache Plume (*Fallugia paradoxa*)], and riparian habitat [New Mexico olive (*Forestiera pubescens*), box elder (*Acer negundo*), narrow leaf cottonwood (*Populus angustifolia*), stinging nettles (*Urtica dioica*), ponderosa pine (*Pinus ponderosa*), field horsetail (*Equisetum arvense*), and poison ivy (*Toxicodendron radicans*)]. El Malpais National Monument (Cibola Co., New Mexico) included arid shrublands, grasslands, piñon-juniper woodlands, and lava flows. The dominant species were: indian rice-grass (*Oryzopsis hymenoides*), rabbit brush (*Chrysothamnus graveolins*), four-wing saltbush (*Atriplex canescens*), apache plume (*Fallugia paradoxa*), singleleaf piñon pine (*Pinus monophylla*), rocky mountain juniper (*Juniperus scopulorum*), ponderosa pine (*Pinus ponderosa*), one seeded juniper (*Juniperus monosperma*), alkali, sacaton (*Sporobolus airoides*), and snake weed (*Gutierrezia*

sarothrae). The habitat at Chaco Culture National Historical Park (San Juan Co., New Mexico) was mostly arid shrubland. The predominant species were: four-wing saltbush (*Atriplex canescens*), Indian rice grass (*Oryzopsis hymenoides*), three-awn grass (*Aristida oligantha*), snake weed (*Gutierrezia sarothrae*), rabbit brush (*Chrysothamnus graveolins*), pale wolfberry (*Lycium pallidum*), cliffrose (*Purshia mexicana*), and alkali sacaton (*Sporobolus airoides*). Study sites along Rito la Presa and its tributaries (Taos Co., New Mexico) were riparian forest. The predominant vegetation found at this location included: Douglas fir (*Pseudotsuga menziesii*), white fir (*Abies concolor*), blue spruce (*Picea pungens*), red currant (*Ribes sativum*), and field horsetail (*Equisetum arvense*). The habitat near Portal, Arizona (Cochise Co.) was desert shrubland. The predominant vegetation found at these study sites included: whitethorn acacia (*Acacia constricta*), snake weed (*Gutierrezia sarothrae*), long-leaf ephedra (*Ephedra trifurca*), Torrey wolfberry (*Lycium torreyi*), tar bush (*Flourensia cernua*), burroweed (*Haplopappus tenuisectus*), bush muhly (*Muhlenbergia porteri*), and soaptree yucca (*Yucca elata*).

Data collected during winter 2004 were collected from old fields in Macon Co., Alabama and near Portal, Arizona (Appendices 3-4). Vegetation found in study areas in Macon Co., Alabama included: horse weed (*Erigeron canadensis*), blackberry (*Rubus*), greenbriar (*Smilax*), and goldenrod (*Solidago*).

Bait.---Stout and Sonenshine (1973) introduced a convenient baiting method for live-trapping studies that was not only efficient in attracting small mammals, but also maximized likelihood of the animal stepping on the treadle. These authors suggested a wax-paper “pack” containing peanut butter mixed with a host of other possible

components. The packs were held in place between the top of the rear door and the roof of the live trap. The packs were more resistant to weather, and significantly reduced the untidiness associated with direct contact of peanut butter inside the trap.

Similar bait packs were used in my study. I mixed 240 ml of Great Value Creamy Peanut Butter (Wal-Mart Stores, Inc., Bentonville, AR) and 175 ml of Old Fashioned Quaker Oats (The Quaker Oats Company, Chicago, IL). Small portions (~3 ml) of the mixture were then placed in the center of 15 by 4-cm Reynolds Cut Rite wax-paper strips (Alcoa Consumer Products, Richmond, VA), folded upward, and pressed until the mixture of peanut butter and rolled oats reached the outside edges of the pack. Traps were baited by lowering the bait pack containing a mixture of peanut butter and rolled oats, which will be referred to hereafter as a peanut butter bait pack, into the back of a Sherman trap (7.5 by 9 by 23 cm; H. B. Sherman Traps, Inc., Tallahassee, FL) and pulling the pack up as the door closed, wedging the bait-containing portion into the top of the trap. So that each animal was exposed to fresh bait, peanut butter bait packs were made each day.

As an experimental control, empty bait packs were placed in half of the traps and were folded and placed in the traps in the same manner as the peanut butter bait packs. The purpose of the empty bait packs was to reduce the chance of selection of a trap due to a visual cue. All traps were baited by tossing a small amount of rolled oats inside the trap and outside the front of the trap (~3 g). To assess the likelihood of animals entering completely unbaited traps, I set out 320 empty traps (i.e., no form of bait) at my study site near Portal, Arizona. Upon checking these traps the next morning, only 3 animals had been captured (2 *D. merriami*, 1 *O. torridus*), and all were dead. These results supported

my decision to add a small amount of oats to the entryway and just inside each trap included in this study, as my goal was to determine if baits containing peanut butter enhanced trap success, not to determine the success of baited versus unbaited traps.

Experimental design.---My study consisted of 2 parts, experiment A and experiment B. The same experimental design was used during summer and winter. For experiment A, I offered small mammals a choice of traps with peanut butter bait packs or traps with empty bait packs. I placed 2 (i.e., paired) Sherman live-traps at each of 40 trap stations along a trap line with trap stations about 5-10 meters apart. One trap was baited with a peanut butter bait pack and the other contained an empty bait pack. A small amount of rolled oats was tossed outside the door and just inside each trap. Trap openings were positioned 5-15 cm apart except on rocky slopes, where trap openings were positioned as close as possible. If upon checking, both traps at a station contained animals, neither was included in the dataset. This was because only 1 of the 2 animals was offered a choice and there was no practical way to determine which trap was first occupied. Trap stations were about 10 m apart at all study sites, except those at Portal, Arizona, which were 5 m apart. I chose to decrease distance between trap stations because this study area was densely populated with small mammals and at 10-m apart, both traps at each station usually were occupied. We began spacing the trap stations 5 m apart on the second evening of trapping at this location.

For experiment B, two separate trap lines were set. One line of 40 traps was baited with peanut butter bait packs and a second line of 40 traps contained empty bait packs. A small amount of rolled oats was tossed outside the door and just inside each trap.

Configuration of experiments A and B was characterized by 3 trap lines; one line with bait peanut butter bait packs, one line of traps containing empty bait packs, and one line of paired traps offering a choice of the 2 treatments (Figure 4). Individual trap lines were at least 100 m apart. One to 2 replicates of each experiment were set up per night at each location. Sherman traps were designated for use either with or without bait containing peanut butter for the duration of the experiments so only the traps designated for use with peanut butter would carry the scent of peanut butter. This prevented other traps from being contaminated with peanut butter or residual oils, which might have produced biased results. Trap lines were set during late afternoon and checked soon after sunrise the following morning. All individuals were examined to determine species, age (adult, subadult, juvenile), sex, and reproductive condition (i.e., scrotal or non-scrotal testes for males, late pregnancy, lactating, post-lactating, and no visual evidence of reproduction for females), and released at the site of capture. After traps were checked, those that were occupied were cleaned using a 10% solution of bleach and water, rinsed, and sun-dried before being reused. This prevented the scent of animals previously in a trap from biasing capture results. Study areas were trapped only once to avoid recaptures, except near Portal, Arizona, where some sites trapped during summer may have been repeated inadvertently during winter.

Statistical analyses.---For both experiments, observed frequencies of captures were analyzed using Chi-Square contingency tests (X^2) to determine if significant differences existed between capture success in traps with peanut butter bait packs and those with empty bait packs in experiments A and B for the 5 most commonly captured species (Zar 1999). If significant differences were observed by species, Chi-Square

contingency tests also were used to investigate if significant differences existed between numbers of captures in the two methods of baiting by age and sex in each experiment. Finally, if significant differences were observed by sex, Chi-Square contingency tests also were used to evaluate reproductive condition (Zar 1999). A Bonferroni correction was used (Sokal and Rohlf 1981), therefore $P = \leq 0.0125$ was considered significant. $P \leq 0.05$ was divided by 4 to correct for resampling of data by species, sex, age, and reproductive condition. All statistical tests were performed using SPSS (version 12.0; SPSS Inc., Chicago, IL).

RESULTS

A total of 1,662 individuals were captured, representing 16 genera and 34 species (Table 1). The most commonly captured species were the Merriam's kangaroo rat (*Dipodomys merriami*; $n = 808$), deer mouse (*Peromyscus maniculatus*; $n = 96$), Bailey's pocket mouse (*Chaetodipus baileyi*; $n = 95$), long-tailed vole (*Microtus longicaudus*; $n = 81$), and southern grasshopper mouse (*Onychomys torridus*; $n = 79$; Figure 1). *D. merriami*, *C. baileyi*, and *O. torridus* were captured only in Arizona, near Portal. *P. maniculatus* was captured in Bandelier National Monument, El Malpais National Monument, Chaco Culture National Historical Park, and along Rito la Presa in New Mexico. *M. longicaudus* was caught in Bandelier National Monument and along Rito la Presa in New Mexico.

Summer.---In experiment A, where a choice was given between 2 paired traps, 1 containing a peanut butter bait pack and the other with an empty bait pack, *D. merriami* (regardless of age, sex, or reproductive condition) was captured significantly more often in traps with empty bait packs than those with peanut butter bait packs ($X^2 = 12.409$, $P < 0.001$). There was no significant difference in number of captures for either treatment for *C. baileyi* ($X^2 = 1.00$, $P = 0.317$), *M. longicaudus* ($X^2 = 0.471$, $P = 0.493$), *O. torridus* ($X^2 = 2.667$, $P = 0.102$), or *P. maniculatus* ($X^2 = 2.500$, $P = 0.114$).

When capture results were analyzed by age, adult *D. merriami* selected traps containing empty packs significantly more often than traps with peanut butter bait packs

($X^2 = 8.76$, $P = 0.004$; Figure 2). When capture results were analyzed by sex, females also selected traps with empty bait packs significantly more often than traps baited with peanut butter bait packs ($X^2 = 9.058$, $P = 0.003$; Figure 3). Analysis of female *D. merriami* by reproductive condition revealed no significant difference in capture success between traps baited with peanut butter bait packs and those containing empty packs (females with no visual signs of reproduction $X^2 = 2.95$, $P = 0.118$; pregnant $X^2 = 2.000$, $P = 0.157$; lactating $X^2 = 0.500$, $P = 0.480$; post lactating $X^2 = 6.231$, $P = 0.014$).

In experiment B, no significant difference was observed in number of individuals captured between traps with bait peanut butter bait packs and traps with empty bait packs for *C. baileyi* ($X^2 = 0.778$, $P = 0.378$), *D. merriami* ($X^2 = 1.89$, $P = 0.663$), *M. longicaudus* ($X^2 = 0.333$, $P = 0.564$), *O. torridus* ($X^2 = 0.200$, $P = 0.655$), or *P. maniculatus* ($X^2 = 0.153$, $P = 0.696$).

Winter.---For experiments A and B during winter, only *D. merriami* captures were analyzed due to small numbers of captures of other species. There was no significant difference between selection of traps with empty bait packs or traps with peanut butter bait packs for experiment A ($X^2 = 2.065$, $P = 0.151$) nor experiment B ($X^2 = 2.101$, $P = 0.147$).

DISCUSSION

Summer- Experiment A.—As predicted, *P. maniculatus* and *M. longicaudus* were captured equally as often in traps with bait peanut butter bait packs as empty bait packs. *P. maniculatus* is omnivorous, consuming vegetation, berries, seeds, fungi, and animal matter in the form of arthropods (Jameson 1952; Vander Wall et al. 2001) and bird nestlings (Bradley and Marzluff 2003). It obtains water from the insect matter it consumes and protein from insects and occasional small vertebrates; therefore, one would expect *P. maniculatus* should be able to metabolize bait such as peanut butter, without disrupting a positive water balance. However, instead of preferentially selecting traps with peanut butter bait packs, it showed no sign of discrimination between the two types of traps (traps with peanut butter bait packs and traps with empty bait packs). Vickery et al. (1994) determined that when given a choice, *P. maniculatus* almost always avoided food sources high in protein. Lewis et al. (2001) reported similar results in the white-footed mouse (*P. leucopus*). When offered a choice between foods that were high, medium, or low in protein, *P. leucopus* never selected foods with high levels of protein. Similarly, *P. maniculatus* captured in this study did not demonstrate partiality to traps baited with protein-rich peanut butter packs. *M. longicaudus* is herbivorous and its digestive tract is specialized for a diet of plant materials such as berries, seeds, and leaves (Howe and Lane 2004, Lee and Houston 1993); however, it also is known to regularly ingest fungi (Rhoades 1986). Because the natural diet of voles is low in protein, and they

are specialized for herbivory, it is not surprising that these animals did not show a preference for traps with peanut butter bait packs.

My prediction that *C. baileyi* would significantly avoid traps with peanut butter bait packs was not supported; instead no difference was observed in success of capture between the two baiting schemes. Although heteromyids are generally considered to be granivorous rodents (MacMillen and Hinds 1983), Reichman (1975) described *C. baileyi* as a dietary generalist. He determined that its diet was comprised mostly of seeds, varying amounts of green vegetation, and as much as 10% insects. Although not significant, *C. baileyi* was captured more often in traps with empty bait packs than traps with peanut butter bait packs; perhaps with larger sample size, a significant difference would have emerged.

My prediction that *Onychomys torridus* would be captured more often in traps with peanut butter bait packs than traps with empty bait packs was not supported. Instead, no difference was observed in success of capture between the 2 baiting schemes. *O. torridus* is an insectivorous rodent, typically consuming foods containing protein, such as arthropods and small vertebrates (McCarty and Southwick 1981). Punzo (2004) determined that congener, Mearn's grasshopper mouse (*Onychomys arenicola*), relies on olfactory cues while foraging. He determined that knowledge of olfactory cues associated with prey is not innate, but rather learned during early periods of development. Because *O. torridus*, like all species in this study, had no experience with peanut butter early in development, it did not recognize it as a food source. This does not discount investigation of the bait packs containing peanut butter and rolled oats because of the

novel scent; however, it would lend support to my results, which showed indifference to the two types of baits.

While it is plausible that *P. maniculatus*, *C. baileyi*, *M. longicaudus*, and *O. torridus* were attracted to only the rolled oats that were administered to the entryway and just inside each trap, I was still able to determine that bait supplemented with peanut butter did not increase or decrease success of capture for these species. If baits supplemented with peanut butter had positively or negatively affected these species, an increase or decrease in success of capture should have been observed in traps baited with peanut butter bait packs, respectively.

Many animals have been shown to discriminate between foods of different nutritional contents and make selections based on dietary needs (Berteaux et al. 1998). Vickery et al. (1994) conducted experiments in the field and in the laboratory to determine if energy and protein content affected food selection of wild deer mice (*P. maniculatus*). The authors offered a simultaneous choice of 4 types of food; energy rich, protein rich, protein poor, or a base diet. Deer mice always selected the high-energy diet over other choices and consistently avoided high-protein foods. Frank (1988) determined that banner-tailed kangaroo rats (*Dipodomys spectabilis*) regulated protein and lipid intake according to degree of humidity and water stress in the laboratory. My data suggest that *D. merriami* acknowledged bait containing peanut butter as an unfavorable food source, and subsequently avoided it. Based on the results presented in Frank (1988), I suggest that the avoidance behavior by *D. merriami* was due to recognition of peanut butter as a potential threat to water balance. Peanut butter contains 54.1 g of fat, 27.1 g protein, and 23.7 g carbohydrates, and essentially no water per 100 ml serving (Great

Value Creamy Peanut Butter; Wal-Mart Stores, Inc., Bentonville, AR). Each peanut butter bait pack in this study contained ~3 ml of peanut butter. Catabolism of 1 g of protein requires excretion of 0.343 g of urea; assuming urine with maximum concentration of urea, ~0.279 g of water would be required to void the amount of protein in each peanut butter bait pack (Schmidt-Nielsen 1964).

Kangaroo rats (*Dipodomys*) and other desert-dwelling mammals persist in habitats that present extraordinary demands on conservation of water by having evolved several behavioral and physiological mechanisms to reduce water loss (Walsberg 2000). Members of the genus *Dipodomys* are nocturnal (Randall 1991), thereby reducing exposure to higher temperatures during day, at which time they remain in burrows. Many researchers have found burrows to be cooler and more humid than conditions above ground during summer, which would minimize water loss to evaporation, but there is controversy as to what extent (Louw and Seely 1982; Schmidt-Nielsen 1964; Walsberg 2000). Merriam's kangaroo rats do not drink water, but rather they rely mainly on preformed water in their diet and metabolic water to satisfy water needs (Nagy and Gruchacz 1994; Schmidt-Nielsen 1964, 1972). Catabolism of food items consumed by *Dipodomys* results in water loss from urination, evaporation, and fecal production (Schmidt-Nielsen 1975); therefore, one mechanism employed by kangaroo rats to conserve water is producing highly concentrated urine (5,020 mOsm/kg in *D. merriami*) and dry feces (Nagy and Gruchacz 1994).

Frank (1988) stated that the amount of water lost through catabolism of foods depends on diet. He suggested that to maximize net production of metabolic water (in arid conditions) kangaroo rats should maximize intake of carbohydrates and minimize

intake of proteins and lipids. He also stated that metabolism of lipids, and especially proteins, results in substantial loss of water, mainly through urination. During laboratory experiments, Frank (1988) showed that under water-stressed conditions, the banner-tailed kangaroo rat, *D. spectabilis*, selected foods high in carbohydrates and low in lipids and proteins. He determined that *D. spectabilis* reduced consumption of foods high in lipid content only when water stressed, and consumed significantly more high-lipid food while in a positive water balance, under humid conditions. To the contrary, *D. spectabilis* kangaroo rats consumed food with intermediate-protein content instead of high-protein content, even while in a positive water balance under humid conditions. Regardless of humidity, kangaroo rats consistently selected foods of the highest carbohydrate content available to them. Although it is likely these laboratory conditions were more extreme than conditions they face in nature, the selection of food items by these animals is still helpful in deciphering bait selection behavior of *D. merriami* in my study.

An alternate hypothesis explaining the avoidance of *D. merriami* to traps with peanut butter bait packs is a neophobic response to unfamiliar scents. *P. maniculatus* has been documented to avoid novel food sources based on smell alone (Sullivan and Sullivan 1980), and this might similarly explain avoidance behavior by *D. merriami*.

Summer- Experiment B.—My data suggest that, when not offered a choice, traps with an empty bait pack were equally as attractive to *D. merriami*, *P. maniculatus*, *C. baileyi*, *M. longicaudus*, and *O. torridus* as traps with peanut butter bait packs, displaying no significant difference between success of capture. It appears that presence of oats was sufficient in attracting animals to traps regardless of type of bait.

There is a great deal of practical significance to the results of experiment B. The data indicate that regardless of what type of bait a species preferred in experiment A, when not given a choice, animals were captured equally as often in traps with peanut butter bait packs as traps with empty bait packs. Because when mammalogists trap they do not offer a choice of baits, my data suggest that the presence of peanut butter bait packs neither enhance nor impair capture success for *D. merriami*, *P. maniculatus*, *C. baileyi*, *M. longicaudus*, or *O. torridus*.

Winter- Experiments A and B.—Results indicated that there was no significant difference between number of captures in traps with empty bait packs or traps baited with peanut butter bait packs for either experiment. I suggest that during winter *D. merriami* encounters fewer sources of possible disruptions to water balance, and therefore can be more liberal in its food selection. As previously mentioned, Frank (1988) observed that *D. spectabilis* avoided high-protein and high-lipid foods under water-stressed conditions, but when in positive water balance they increased selection of high-lipid foods, although still limiting their protein intake to a moderate amount (Frank 1988). However, the natural aversion to foods high in protein could have prevented peanut butter bait packs from being the most effective bait.

While I am unable to identify the experiences during the formative periods that influenced food selection behaviors of the animals in this study, it is clear that *D. merriami* expressed aversion to traps containing peanut butter bait packs. This may be an expression of neophobia or of learned behavior to avoid foods containing high levels of protein. It is possible that *P. maniculatus*, *C. baileyi*, *M. longicaudus*, and *O. torridus* displayed neither avoidance nor partiality to traps containing peanut butter bait packs

because either they did not recognize this bait as a food source, or they simply were not significantly attracted to this bait.

PRACTICAL IMPLICATIONS

Based on my data, I conclude that baiting traps with peanut butter bait packs does not increase success of capture for *P. maniculatus*, *C. baileyi*, *M. longicaudus*, or *O. torridus*. In addition to lack of effectiveness, peanut butter bait packs required additional, unnecessary cost and time for preparation. Ants were also found on peanut butter bait packs and none were found on empty bait packs. Further investigation of live-trapping for small mammals using baits supplemented with peanut butter are needed to determine effectiveness of capturing other species, however, based on analyses of data collected during my study I would not recommend the use of baits supplemented with peanut butter as effective means to capture *C. baileyi*, *D. merriami*, *M. longicaudus*, *O. torridus*, or *P. maniculatus*. Instead, I would recommend the use of rolled oats.

LITERATURE CITED

- Altshuler, D. L., and A. M. Nunn. 2001. Observational learning in hummingbirds. *The Auk* 118:795-799.
- Anderson, B. W., and R. D. Ohmart. 1977. Rodent bait additive which repels insects. *Journal of Mammalogy* 58:242.
- Barnett, S. A. 1958. Experiments on "neophobia" in wild and laboratory rats. *British Journal of Psychology* 49:195-201.
- Beer, J. R. 1964. Bait preferences of some small mammals. *Journal of Mammalogy* 45:632-634.
- Benedict, R. A. 1999. Morphological and mitochondrial DNA variation in a hybrid zone between short-tailed shrews (*Blarina*) in Nebraska. *Journal of Mammalogy* 80:112-134.
- Berteaux, D., M. Crête, J. M. Huot, and J. P. Ouellet. 1998. Food choice by white-tailed deer in relation to protein and energy content of the diet: a field experiment. *Oecologia* 115:84-92.
- Birch, L. L. 1999. Development of food preferences. *Annual Review of Nutrition* 19:41-62.
- Blass, E. M., and E. Fitzgerald. 1988. Milk-induced analgesia and comforting in 10-day old rats: opioid mediation. *Pharmacology, Biochemistry, and Behavior* 29:9-13.

- Bradley, J. E., and J. M. Marzluff. 2003. Rodents as nest predators: influences on predatory behavior and consequences to nesting birds. *The Auk* 120:1180-1187.
- Braun, C. E. 2005. Techniques for wildlife investigations and management. The Wildlife Society, Bethesda, MD.
- Buczowski, G., R. J. Kopanic Jr., and C. Schal. 2001. Transfer of ingested insecticides among cockroaches: Effects of active ingredient, bait formulation, and assay procedures. *Journal of Economic Entomology* 94:1229-1236.
- Cabanac, M. 1999. Emotion and Physiology. *Japanese Journal of Physiology* 49:1-10.
- Cadieu, J. C., and N. Cadieu. 1998. Is food recognition in an unfamiliar environment a long-term effect of stimulus or local enhancement? A study in the juvenile canary. *Behavioural Processes* 43:183-192.
- Creekmore, T. E., W. O. Fletcher, and D. E. Stallknecht. 1998. Evaluation of two oral baiting systems for wild rodents. *Journal of Wildlife Diseases* 34:369-372.
- Creekmore, T. E., S. B. Linhart, J. L. Corn, M. D. Whitney, B. D. Snyder, and V. F. Nettles. 2002. Field evaluation of baits and baiting strategies for delivering oral vaccine to mongooses in Antigua, West Indies. *Journal of Wildlife Diseases* 30:497-505.
- Daly, M., L. F. Jacobs, M. I. Wilson, and R. R. Behrends. 1992. Scatter hoarding by kangaroo rats (*Dipodomys merriami*) and pilferage from their caches. *Behavioral Ecology* 3:102-111.
- Flickinger, E. L. 1989. Observations of predation by red imported fire ants on live-trapped wild cotton rats. *Texas Journal of Science* 41:223-224.
- Forbes, J. M. 1998. Dietary awareness. *Applied Animal Behavior Science* 57:287-297.

- Forbes, J. M., and I. Kyriazakis. 1995. Food preferences in farm animals: why don't they always choose wisely? *Proceeding of the Nutrition Society* 54:429-440.
- Frank, C. L. 1988. Diet selection by a heteromyid rodent: role of net metabolic water production. *Ecology* 69:1943-1951.
- Fuertes, B., J. García, and J. M. Colino. 2002. Use of fish nets as a method to capture small rails. *Journal of Field Ornithology* 73:220-223.
- Galef, B. G., Jr. 1970. Aggression and timidity: Responses to novelty in ferral Norway rats. *Journal of Comparative and Physiological Psychology* 70:370-381.
- Galef, B. G., Jr. 1995. Why behaviour patterns that animals learn socially are locally adaptive. *Animal Behaviour* 49:1325-1344.
- Galef, B. G., Jr. 1996. Social influences of food preferences and feeding behaviors of vertebrates. Pp. 207-231 in *Why we eat what we eat: the psychology of eating* (E. D. Capaldi, ed.). American Psychological Association, New York.
- Galef, B. G., Jr., and M. Beck. 1985. Adverse and attractive marking of toxic and safe foods by Norway rats. *Behavioral and Neural Biology* 43:298-310.
- Galef, B. G., Jr., and M. M. Clark. 1971. Parent-offspring interactions determine time and place of first ingestion of solid food by wild rat pups. *Psychonomic Science* 25:15-16.
- Galef, B. G., Jr., and P. W. Henderson. 1972. Mother's milk: a determinant of feeding preferences of weaning rat pups. *Journal of Comparative and Physiological Psychology* 78:213-219.
- Galef, B. G., Jr., and K. N. Laland. 2005. Social learning in animals: empirical studies and theoretical models. *BioScience* 55:489-499.

- Galef, B. G., Jr., and D. F. Sherry. 1973. Mother's milk: a medium for the transmission of cues reflecting the flavor of mother's diet. *Journal of Comparative and Physiological Psychology* 83:374-378.
- Galef, B. G. Jr., L. M. McQuoid, and E. E. Whiskin. 1990. Further evidence that Norway rats do not socially transmit learned aversions to toxic baits. *Animal Learning and Behavior* 18:199-205.
- Galef, B. G., Jr., S. W. Wigmore, and D. J. Kinnett. 1983. A failure to find socially mediated taste aversion learning in Norway rats (*R. norvegicus*). *Journal of Comparative and Physiological Psychology* 97:358-363.
- Getz, L. L., and M. L. Prather. 1975. A method to prevent removal of trap bait by insects. *Journal of Mammalogy* 56:955.
- Grover, C. A., J. S. Kixmiller, C. A. Erickson, A. H. Becker, and S. F. Davis. 1988. The social transmission of information concerning aversively conditioned liquids. *Psychological Record* 38:557-566.
- Hepper, P. G. 1988. Adaptive fetal learning: prenatal exposure to garlic affects postnatal preference. *Animal Behaviour* 36:935-936.
- Howard, W. E., and R. E. Cole. 1967. Olfaction in seed detection by deer mice. *Journal of Mammalogy* 48:147-150.
- Howard, W. E., R. E. Marsh, and R. C. Cole. 1968. Food detection by deer mice using olfactory rather than visual cues. *Animal Behaviour* 16:13-18.
- Howe, H. F., and D. Lane. 2004. Vole-driven succession in experimental wet-prairie restorations. *Ecological Applications* 14: 1295-1305.

- Jacob, J., N. A. Herawati, S. A. Davis, and G. R. Singleton. 2004. The impact of sterilized females on enclosed populations of ricefield rats. *Journal of Wildlife Management* 68:1130-1137.
- Jameson, E. W., Jr. 1952. Food of deer mice, *P. maniculatus* and *P. boyleii*, in the northern Sierra Nevada, California. *Journal of Mammalogy* 33:50-60.
- Johnson, T. K., and C. D. Jorgensen. 1981. Ability of desert rodents to find buried seeds. *Journal of Range Management* 34:312-314.
- Johnson, W. W. 1969. Dispensing bait with a caulking gun. *Journal of Mammalogy* 50:149.
- Jones, E. G., A. Tselepides, P. M. Bagley, M. A. Collins, and I. G. Priede. 2003. Bathymetric distribution of some benthic and benthopelagic species attracted to baited cameras and traps in the deep eastern Mediterranean. *Marine Ecology Progress* 251:75-86.
- Karr, L. L., J. J. Sheets, J. E. King, and J. E. Dripps. 2004. Laboratory Performance and Pharmacokinetics of the Benzoylphenylurea Noviflumuron in Eastern Subterranean Termites (Isoptera: Rhinotermitidae). *Journal of Economic Entomology* 97:593-600.
- Lee, L. L. 1997. Effectiveness of live traps and snap traps in trapping small mammals in Kinmen. *Acta Zoologica Taiwanica* 8:79-85.
- Lee, W. B., and D. C. Houston. 1993. The role of coprophagy in digestion in voles (*Microtus agrestis* and *Clethrionomys glareolus*). *Functional Ecology* 7:427-432.

- Lewis, C. E., T. W. Clark, and T. L. Derting. 2001. Food selection by the white-footed mouse (*P. leucopus*) on the basis of energy and protein contents. *Canadian Journal of Zoology* 79:562-568.
- Lindzey, F. G., S. K. Thompson, and J. I. Hodges. 1977. Scent station index of black bear abundance. *The Journal of Wildlife Management* 41:151-153.
- Louw, G. N., and M. K. Seely. 1982. *Ecology of desert organisms*. Longman Inc., New York.
- MacMillen, R. E. 1983. Water regulation in *Peromyscus*. *Journal of Mammalogy* 64:38-47.
- MacMillen, R. E., and D. S. Hinds. 1983. Water regulatory efficiency in heteromyid rodents: a model and its application. *Ecology* 64:152-164.
- Manville, C. J., S. A. Barnum, and J. R. Tester. 1992. Influence of bait on arboreal behavior of *Peromyscus leucopus*. *Journal of Mammalogy* 73:335-336.
- Mason, J. R., A. H. Arzt, and R. F. Reidinger. 1984. Comparative assessment of food preferences and aversions acquired by blackbirds via observational learning. *The Auk* 101:796-803.
- Masser, M. P., and W. E. Grant. 1986. Fire ant-induced trap mortality of small mammals in East-central Texas. *The Southwestern Naturalist* 31:540-542.
- Michaud, J.P. 2003. Toxicity of fruit fly baits to beneficial insects in citrus. *Journal of Insect Science* 3:1-9.
- McCarty, R., and C. H. Southwick. 1981. Food deprivation: effects on the predatory behavior of southern grasshopper mice (*Onychomys torridus*). *Aggressive Behavior* 7:123-130.

- Mitchell, M. S., R. A. Lancia, and E. J. Jones. 1996. Use of insecticide to control destructive activity of ants during trapping of small mammals. *Journal of Mammalogy* 77:1107-1113.
- Moors, P. J. 1985. Norway rats (*Rattus norvegicus*) on the Noises and Motukawao islands, Hauraki Gulf, New Zealand. *New Zealand Journal of Ecology* 8:37-54.
- Morrison, L. W., S. D. Porter, E. Daniels, and M. D. Korzhukin. 2004. Potential global range expansion of the invasive fire ant, *Solenopsis invicta*. *Biological Invasions* 6:183-191.
- Nagy, K. A., and M. J. Gruchacz. 1994. Seasonal water and energy metabolism of the desert-dwelling kangaroo rat (*Dipodomys merriami*). *Physiological Zoology* 67:1461-1478.
- Patric, E. F. 1970. Bait preferences of small mammals. *Journal of Mammalogy* 50:179-182.
- Pech, R., G. M. Hood, J. McIlroy, G. and Saunders 1997. Can foxes be controlled by reducing their fertility? *Reproduction, Fertility, and Development* 9:41-50.
- Pedersen, R. J. 1977. Summer elk trapping with salt. *Wildlife Society Bulletin* 5:72-73.
- Punzo, F. 2004. Adult foraging behavior of Mearns' grasshopper mouse, *Onychomys arenicola* (Rodentia: Muridae) is influenced by early olfactory experience. *Texas Journal of Science* 56:141-148.
- Pyare, S., and W. S. Longland. 2000. Seedling-aided cache detection by heteromyid rodents. *Oecologia* 122:66-71.
- Randall, J. A. 1991. Mating strategies of a nocturnal, desert rodent (*Dipodomys spectabilis*). *Behavioral Ecology and Sociobiology* 28:215-220.

- Reebs, S. G., L. Boudreau, P. Hardie, and R. A. Cunjak. 1995. Diel activity patterns of lake chubs and other fishes in a temperate stream. *Canadian Journal of Zoology* 73:1221-1227.
- Reichman, O. J. 1975. Relation of desert rodent diets to available resources. *Journal of Mammalogy* 56:731-751.
- Rhoades, F. 1986. Small mammal mycophagy near woody debris in the Stehekin River Valley, Washington. *Northwest Science* 60: 150-153.
- Schaefer, H. M., and V. Schmidt. 2004. Detectability and content as opposing signal characteristics in fruits. *Proceeding of the Royal Society of London, series B, Biological Sciences* 271: S370-S373.
- Schmidt, V., and H. M. Schaefer. 2004. Unlearned preference for red may facilitate recognition of palatable food in young omnivorous birds. *Evolutionary Ecology Research* 6:919-925.
- Schmidt-Nielsen, K. 1964. *Desert animals: physiological problems of heat and water.* Oxford University Press, London, England.
- Schmidt-Nielsen, K. 1972. *How animals work.* Cambridge University Press, London, United Kingdom.
- Schmidt-Nielsen, K. 1975. *Animal physiology: adaptation and environment.* Cambridge University Press, London, United Kingdom.
- Schroder, R. F. W., P. A. W. Martin, M. M. Athanas. 2001. Effect of a Phloxine B-Cucurbitacin Bait on Diabroticite Beetles (Coleoptera: Chrysomelidae). *Journal of Economic Entomology* 94:892-897.

- Sivaprakasam, C. and G. Durairaj. 1995. Laboratory evaluation of bait base for the control of Indian field mouse, *Mus booduga* (Gray). Indian Journal of Experimental Biology 33:497-499.
- Sokal, R. R., and F. J. Rohlf. 1981. Biometry: the principles and practice of statistics in biological research. 2nd ed. W. H. Freeman, San Francisco.
- Steelman, H. G., S. E. Henke, and G. M. Moore. 1998. Gray fox response to baits and attractants for oral rabies vaccination. Journal of Wildlife Diseases 34:764-770.
- Stout, I. J., and D. E. Sonenshine. 1973. A convenient bait for small mammal live trapping studies. Acta Theriologica 18:123.
- Sullivan, D. S., and T. P. Sullivan. 1980. Deer mouse trappability in relation to bait preference. Canadian Journal of Zoology 58:2282-2284.
- Szocs, G., M. Toth, Z. Karpati, J. Zhu, C. Lofstedt, E. Plass, and W. Francke. 2004. Identification of polyenic hydrocarbons from the northern winter moth, *Operophtera fagata*, and development of a species specific lure for pheromone traps. Chemoecology 14:53-58.
- Turro, I., R. H. Porter, and M. Picard. 1994. Olfactory cues mediate food selection by young chicks. Physiology and Behavior 55:761-767.
- Vabø, R., G. Huse, A. Fernö, T. Jørgensen, S. Løkkeborg, and G. Skaret. 2004. Simulating search behavior of fish towards bait. ICES journal of Marine Science 61:1224-1232.
- Vander Wall, S. B. 1991. Mechanisms of cache recovery by yellow pine chipmunks. Animal Behaviour 41:851-863.

- Vander Wall, S. B. 2000. The influence of environmental conditions on cache recovery and cache pilferage by yellow pine chipmunks (*Tamias amoenus*) and deer mice (*Peromyscus maniculatus*). *Behavioral Ecology* 11:544-549.
- Vander Wall, S. B., T. C. Thayer, J. S. Hodge, M. J. Beck, and J. K. Roth. 2001. Scatter-hoarding behavior of deer mice (*P. maniculatus*). *Western North American Naturalist* 61:109-113.
- Vander Wall, S. B., M. J. Beck, J. S. Briggs, J. K. Roth, T. C. Thayer, J. L. Hollander, and J. M. Armstrong. 2003. Interspecific variation in the olfactory abilities of granivorous rodents. *Journal of Mammalogy* 84:487-496.
- Vickery, W. L., J. L. Daoust, A. E. Wartiti, and J. Peltier. 1994. The effect of energy and protein content on food choice by deer mice, *Peromyscus maniculatus* (Rodentia). *Animal Behaviour* 47:55-64.
- Vieira, M. V., C. E. V. Grelle, and R. Gentile. 2004. Differential trappability of small mammals in three habitats of southeastern Brazil. *Brazilian Journal of Biology* 64:895-900.
- Walsberg, G. E. 2000. Small mammals in hot deserts: some generalizations revisited. *BioScience* 50:109-120.
- Weihong, J., C. R. Veitch, and J. L. Craig. 1999. An evaluation of the efficiency of rodent trapping methods: the effect of trap arrangement, cover type, and bait. *New Zealand Journal of Ecology* 23:45-51.
- Wong, R., and C. B. McBride. 1993. Flavour neophobia in gerbils (*Meriones unguiculatus*) and hamsters (*Mesocricetus auratus*). *Quarterly Journal of Experimental Psychology B* 46:129-143.

- Woodman, N., R. M. Timm, N. A. Slade, and T. J. Doonan. 1996. Comparison of traps and baits for censusing small mammals in Neotropical lowlands. *Journal of Mammalogy* 77:274-281.
- Wyrwicka, W. 1978. Imitation of mother's inappropriate food preference in weanling kittens. *Pavlovian Journal of Biological Science* 13:55-72.
- Wyrwicka, W. 1981. The development of food preferences: parental influences and the primary effect. Charles C Thomas, Springfield, Illinois.
- Zar, J. H. 1999. *Biostatistical analysis*. 4th ed. Prentice Hall, Upper Saddle River, New Jersey.

Table 1. Capture results during summer 2003 and winter 2004 for experiments A and B by species. In experiment A, animals were given a choice of paired traps, one baited with an empty pack (EP) and the other with a peanut butter bait pack (PB). In experiment B, animals encountered a single trap either baited with an empty pack (EP) or a peanut butter pack (PB). A dash indicates that a species was not sampled for, therefore none could be captured.

Species	Summer				Winter				Total
	Experiment A		Experiment B		Experiment A		Experiment B		
	EP	PB	EP	PB	EP	PB	EP	PB	
<i>Ammospermophilus harrisi</i>	0	0	1	1	0	0	1	0	3
<i>Chaetodipus baileyi</i>	15	10	28	35	2	0	1	4	95
<i>C. intermedius</i>	2	1	0	0	-	-	-	-	3
<i>C. penicillatus</i>	16	4	7	23	0	0	0	0	50
<i>Dipodomys merriami</i>	96	53	97	92	70	54	160	186	808
<i>D. ordii</i>	7	9	4	5	1	0	1	0	27
<i>D. spectabilis</i>	3	1	3	3	0	0	1	0	11
<i>Microtus longicaudus</i>	14	19	22	26	-	-	-	-	81
<i>Mustela erminea</i>	0	0	0	1	-	-	-	-	1
<i>Neotoma albigula</i>	12	8	11	8	0	0	0	0	39
<i>N. mexicana</i>	3	4	12	8	0	0	0	0	27
<i>N. micropus</i>	1	0	0	0	-	-	-	-	1
<i>Onychomys leucogaster</i>	7	11	12	15	-	-	-	-	45
<i>O. torridus</i>	8	16	21	23	4	2	4	1	79
<i>Peromyscus boylii</i>	5	2	12	4	-	-	-	-	23
<i>P. eremicus</i>	4	5	11	14	0	0	6	6	46
<i>P. maniculatus</i>	25	14	30	27	-	-	-	-	96
<i>P. nasutus</i>	8	4	6	18	-	-	-	-	36
<i>P. polionotus</i>	-	-	-	-	1	0	2	1	4
<i>P. truei</i>	8	6	3	9	-	-	-	-	26
<i>Perognathus flavescens</i>	1	1	0	1	-	-	-	-	3
<i>P. flavus</i>	16	12	5	7	-	-	-	-	40
<i>Reithrodontomys humulis</i>	-	-	-	-	0	0	1	1	2
<i>R. megalotis</i>	3	1	4	6	-	-	-	-	14
<i>Sigmodon fulviventer</i>	0	1	3	8	-	-	-	-	12
<i>S. hispidus</i>	-	-	-	-	2	0	14	2	18
<i>Spermophilus lateralis</i>	1	0	1	0	-	-	-	-	2
<i>Sylvilagus nuttallii</i>	1	0	0	0	-	-	-	-	1
<i>Sorex</i>	1	1	1	2	-	-	-	-	5
<i>Sorex palustris</i>	0	0	2	1	-	-	-	-	3
<i>Tamias dorsalis</i>	0	0	1	0	-	-	-	-	1
<i>T. minimus</i>	0	4	5	6	-	-	-	-	15
<i>T. quadrivittatus</i>	1	8	5	7	-	-	-	-	15
<i>Zapus princeps</i>	7	4	8	5	-	-	-	-	24
Total	265	199	315	355	80	56	191	201	1662

Figure 1. Capture results for most commonly trapped species during summer 2004 in experiments A and B. In experiment A, animals were given a choice of paired traps, one baited with an empty pack and the other with a peanut butter bait pack. In experiment B, animals encountered a single trap either baited with an empty pack or a peanut butter pack.

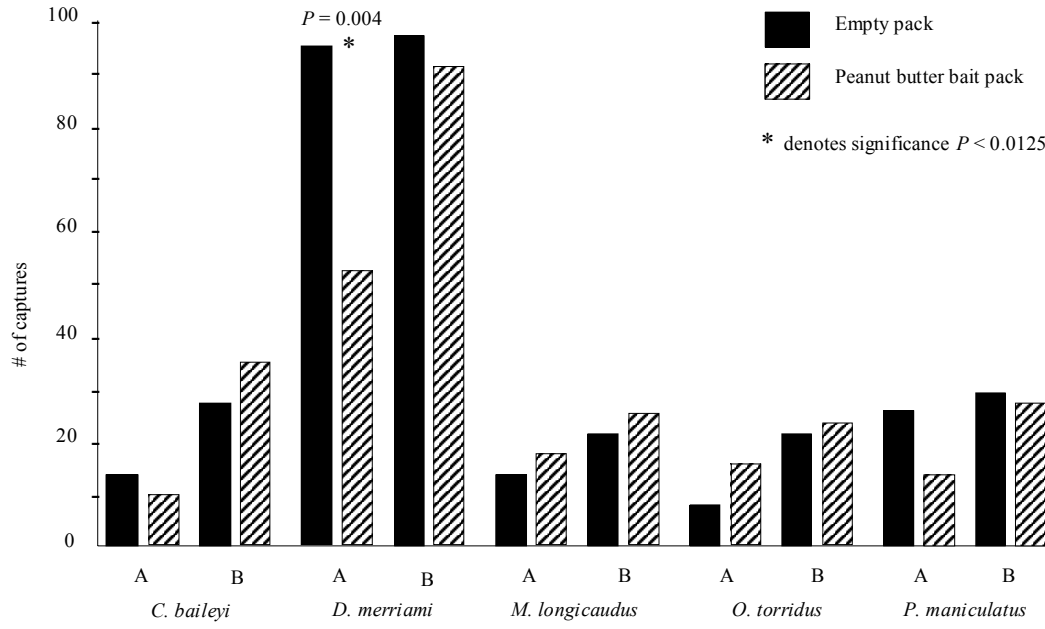


Figure 2. Capture results for *Dipodomys merriami* by age during summer 2004 in experiments A and B. In experiment A, animals were given a choice of paired traps, one baited with an empty pack and the other with a peanut butter bait pack. In experiment B, animals encountered a single trap either baited with an empty pack or a peanut butter bait pack.

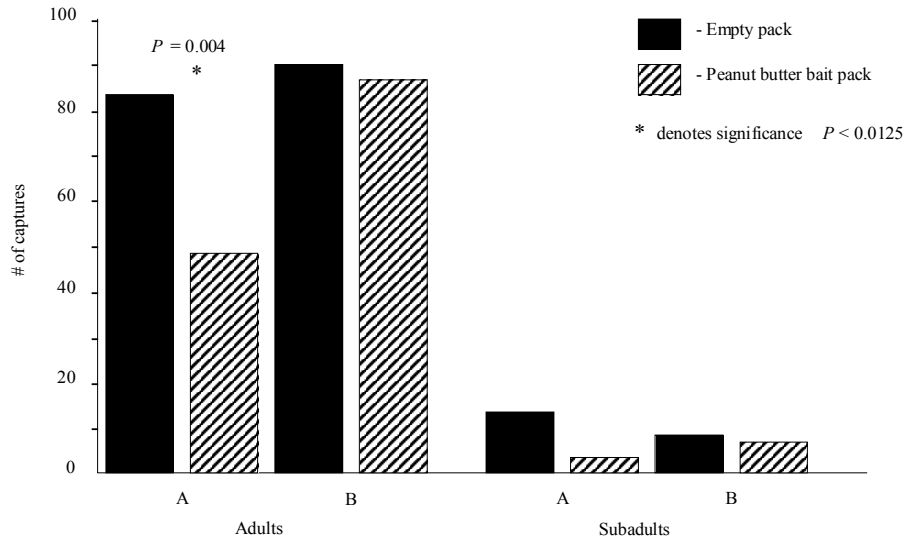


Figure 3. Capture results for *Dipodomys merriami* by sex during summer 2004 in experiments A and B. In experiment A, animals were given a choice of paired traps, one baited with an empty pack and the other with a peanut butter bait pack. In experiment B, animals encountered a single trap either baited with an empty pack or a peanut butter pack.

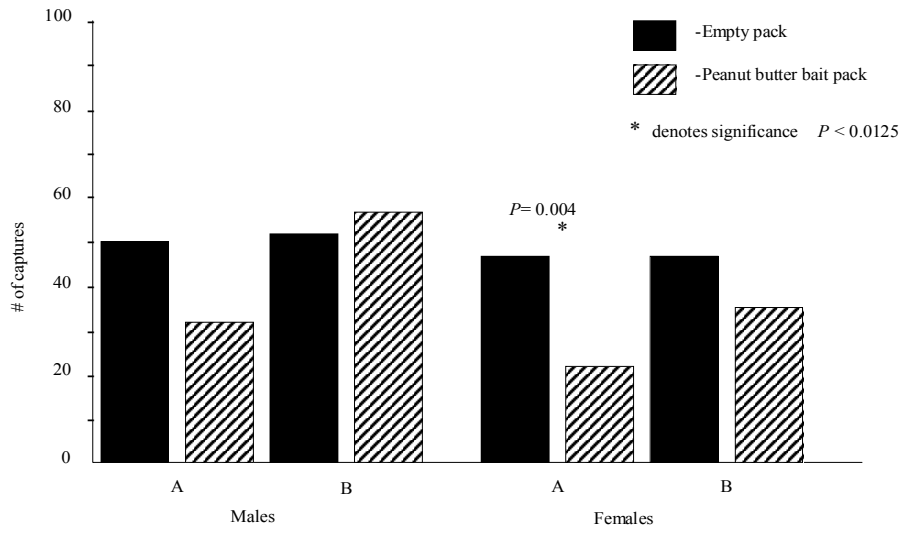
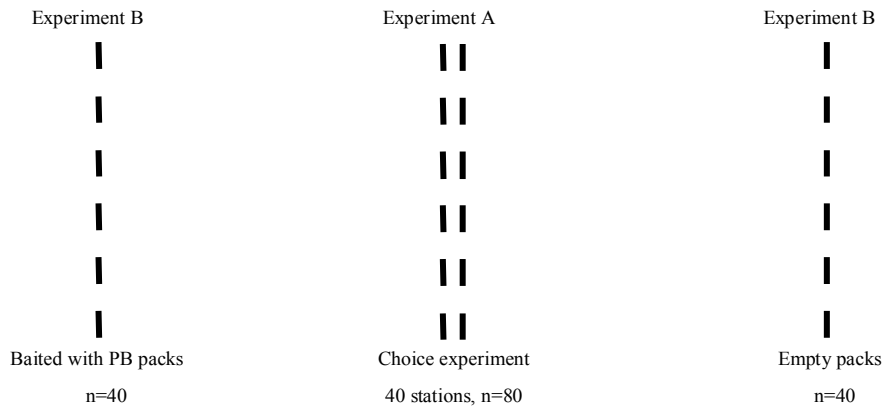


Figure 4. Sample configuration of experiments A and B.



Appendix 1. Data collected during summer 2003 for experiment A by location. BNM-Bandelier National Monument (Los Alamos and Sandoval Cos., New Mexico), AZ- near Portal (Cochise Co., Arizona), CCNHP- Chaco Culture National Historical Park (San Juan Co., New Mexico), RP- along Rito la Presa (Taos Co., New Mexico), EMPNM- El Mal Pais National Monument (Cibola Co., New Mexico). Reproductive condition (NR- no visual signs of reproduction, P-pregnant, L-Lactating, S- descended testes, PL- post lactating). SA indicates sub-adults and A indicates adults. Bait type indicates which trap the individual was captured in at the trap station (EP- empty pack, PB- peanut butter bait pack). The symbol (-) indicates that the given information could not be collected.

Location	Date	Species	Sex	Age	Repro	Bait	Latitude	Longitude
BNM	8-Jun-03	<i>Peromyscus maniculatus</i>	F	SA	NR	EP	E0383859	N3961879
BNM	8-Jun-03	<i>Peromyscus truei</i>	F	SA	NR	EP	E0383859	N3961879
BNM	8-Jun-03	<i>Peromyscus truei</i>	M	A	S	PB	E0383859	N3961879
BNM	8-Jun-03	<i>Tamias quadrivittatus</i>	F	A	NR	PB	E0383859	N3961879
BNM	9-Jun-03	<i>Chaetodipus intermedius</i>	F	A	L	EP	E0385328	N3959676
BNM	9-Jun-03	<i>Peromyscus boylii</i>	M	A	S	EP	E0385328	N3959676
BNM	9-Jun-03	<i>Peromyscus boylii</i>	M	A	S	EP	E0385328	N3959676
BNM	9-Jun-03	<i>Peromyscus boylii</i>	M	SA	NR	PB	E0385328	N3959676
BNM	9-Jun-03	<i>Peromyscus boylii</i>	M	A	S	PB	E0385328	N3959676
BNM	9-Jun-03	<i>Peromyscus boylii</i>	M	A	S	EP	E0385059	N3959633
BNM	9-Jun-03	<i>Peromyscus boylii</i>	F	A	PL	EP	E0385059	N3959633
BNM	9-Jun-03	<i>Peromyscus nasutus</i>	M	A	S	EP	E0385328	N3959676
BNM	9-Jun-03	<i>Peromyscus nasutus</i>	F	A	L	EP	E0385328	N3959676
BNM	9-Jun-03	<i>Peromyscus nasutus</i>	M	A	S	PB	E0385328	N3959676
BNM	9-Jun-03	<i>Tamias quadrivittatus</i>	F	A	NR	EP	E0385328	N3959676
BNM	9-Jun-03	<i>Tamias quadrivittatus</i>	F	A	NR	PB	E0385328	N3959676
BNM	9-Jun-03	<i>Tamias quadrivittatus</i>	M	A	NR	PB	E0385328	N3959676
BNM	9-Jun-03	<i>Tamias quadrivittatus</i>	M	A	NR	PB	E0385059	N3959633
BNM	12-Jun-03	<i>Peromyscus maniculatus</i>	M	A	NR	PB	E0384799	N3961754
BNM	12-Jun-03	<i>Peromyscus truei</i>	F	A	NR	EP	E0384799	N3961754
BNM	12-Jun-03	<i>Peromyscus truei</i>	F	A	PL	EP	E0384799	N3961754
BNM	13-Jun-03	<i>Chaetodipus intermedius</i>	M	A	S	EP	E0386026	N3959061
BNM	13-Jun-03	<i>Chaetodipus intermedius</i>	F	A	NR	PB	E0386026	N3959061
BNM	13-Jun-03	<i>Neotoma albigula</i>	M	SA	NR	EP	E0386026	N3959061
BNM	13-Jun-03	<i>Neotoma albigula</i>	F	A	L	PB	E0386026	N3959061
BNM	13-Jun-03	<i>Peromyscus boylii</i>	F	A	NR	EP	E0386026	N3959061
BNM	13-Jun-03	<i>Peromyscus nasutus</i>	F	A	NR	EP	E0386026	N3959061
BNM	13-Jun-03	<i>Peromyscus nasutus</i>	F	A	NR	PB	E0386026	N3959061
BNM	13-Jun-03	<i>Peromyscus nasutus</i>	M	A	S	PB	E0386026	N3959061
BNM	13-Jun-03	<i>Peromyscus truei</i>	F	A	L	EP	E0386026	N3959061
BNM	13-Jun-03	<i>Tamias quadrivittatus</i>	.	A	-	PB	E0386026	N3959061
BNM	13-Jun-03	<i>Tamias quadrivittatus</i>	M	A	NR	PB	E0386026	N3959061
BNM	13-Jun-03	<i>Tamias quadrivittatus</i>	M	A	NR	PB	E0386026	N3959061
BNM	15-Jun-03	<i>Microtus longicaudus</i>	F	SA	NR	EP	E0371242	N3967582
BNM	15-Jun-03	<i>Microtus longicaudus</i>	F	A	L	PB	E0371242	N3967582
BNM	15-Jun-03	<i>Neotoma mexicana</i>	F	A	PL	EP	E0371242	N3967582

BNM	15-Jun-03	<i>Peromyscus maniculatus</i>	F	A	PL	PB	E0371242	N3967582
BNM	15-Jun-03	<i>Tamias minimus</i>	M	A	NR	PB	E0371242	N3967582
BNM	15-Jun-03	<i>Tamias minimus</i>	F	A	L	PB	E0371242	N3967582
BNM	16-Jun-03	<i>Microtus longicaudus</i>	M	SA	NR	EP	E0371091	N3967207
BNM	16-Jun-03	<i>Microtus longicaudus</i>	F	A	P	PB	E0371091	N3967207
BNM	16-Jun-03	<i>Microtus longicaudus</i>	F	A	L	PB	E0371091	N3967207
BNM	16-Jun-03	<i>Neotoma mexicana</i>	F	A	NR	EP	E0371091	N3967207
BNM	16-Jun-03	<i>Neotoma mexicana</i>	M	SA	NR	EP	E0371091	N3967207
BNM	16-Jun-03	<i>Peromyscus maniculatus</i>	F	A	NR	EP	E0371091	N3967207
BNM	16-Jun-03	<i>Peromyscus maniculatus</i>	M	A	NR	EP	E0371091	N3967207
BNM	16-Jun-03	<i>Peromyscus maniculatus</i>	M	A	NR	EP	E0371091	N3967207
BNM	16-Jun-03	<i>Peromyscus maniculatus</i>	M	A	NR	PB	E0371091	N3967207
BNM	16-Jun-03	<i>Peromyscus maniculatus</i>	M	A	S	PB	E0371091	N3967207
BNM	16-Jun-03	<i>Tamias minimus</i>	M	A	NR	PB	E0371091	N3967207
BNM	17-Jun-03	<i>Peromyscus truei</i>	M	A	NR	PB	E0385226	N3961463
BNM	19-Jun-03	<i>Neotoma mexicana</i>	M	A	S	PB	E0370293	N3966514
BNM	19-Jun-03	<i>Neotoma mexicana</i>	F	A	P	PB	E0370293	N3966514
BNM	19-Jun-03	<i>Neotoma mexicana</i>	F	A	L	PB	E0370293	N3966514
BNM	19-Jun-03	<i>Peromyscus maniculatus</i>	F	SA	NR	EP	E0370293	N3966514
BNM	19-Jun-03	<i>Peromyscus maniculatus</i>	M	A	S	PB	E0370293	N3966514
BNM	19-Jun-03	<i>Spermophilus lateralis</i>	F	A	PL	EP	E0370293	N3966514
BNM	19-Jun-03	<i>Sylvilagus nuttali</i>	-	SA	NR	EP	E0370293	N3966514
BNM	19-Jun-03	<i>Tamias quadrivittatus</i>	-	-	-	PB	E0370293	N3966514
AZ	22-Jun-03	<i>Chaetodipus baileyi</i>	F	SA	NR	EP	31°56.094N	109°05.249
AZ	22-Jun-03	<i>Chaetodipus baileyi</i>	M	SA	NR	EP	31°56.094N	109°05.249
AZ	22-Jun-03	<i>Chaetodipus baileyi</i>	F	SA	NR	PB	31°56.094N	109°05.249
AZ	22-Jun-03	<i>Chaetodipus baileyi</i>	M	SA	NR	PB	31°56.094N	109°05.249
AZ	22-Jun-03	<i>Chaetodipus penicillatus</i>	-	SA	-	EP	31°56.094N	109°05.249
AZ	22-Jun-03	<i>Chaetodipus penicillatus</i>	M	A	NR	EP	31°56.094N	109°05.249
AZ	22-Jun-03	<i>Chaetodipus penicillatus</i>	M	A	NR	EP	31°56.094N	109°05.249
AZ	22-Jun-03	<i>Chaetodipus penicillatus</i>	M	A	S	EP	31°56.094N	109°05.249
AZ	22-Jun-03	<i>Chaetodipus penicillatus</i>	F	A	L	PB	31°56.094N	109°05.249
AZ	22-Jun-03	<i>Dipodomys merriami</i>	F	A	NR	EP	31°56.094N	109°05.249
AZ	22-Jun-03	<i>Dipodomys merriami</i>	F	A	NR	EP	31°56.094N	109°05.249
AZ	22-Jun-03	<i>Dipodomys merriami</i>	F	A	NR	EP	31°56.094N	109°05.249
AZ	22-Jun-03	<i>Dipodomys merriami</i>	M	A	S	EP	31°56.094N	109°05.249
AZ	22-Jun-03	<i>Dipodomys merriami</i>	M	A	S	EP	31°56.094N	109°05.249
AZ	22-Jun-03	<i>Dipodomys merriami</i>	F	A	L	EP	31°56.094N	109°05.249
AZ	22-Jun-03	<i>Dipodomys merriami</i>	F	A	PL	EP	31°56.094N	109°05.249
AZ	22-Jun-03	<i>Dipodomys merriami</i>	F	A	PL	EP	31°56.094N	109°05.249
AZ	22-Jun-03	<i>Dipodomys merriami</i>	F	A	NR	PB	31°56.094N	109°05.249

AZ	22-Jun-03	<i>Dipodomys merriami</i>	M	A	S	PB	31°56.094N	109°05.249
AZ	22-Jun-03	<i>Dipodomys merriami</i>	M	A	S	PB	31°56.094N	109°05.249
AZ	22-Jun-03	<i>Dipodomys merriami</i>	F	A	PL	PB	31°56.094N	109°05.249
AZ	22-Jun-03	<i>Dipodomys ordii</i>	M	A	S	PB	31°56.094N	109°05.249
AZ	23-Jun-03	<i>Chaetodipus baileyi</i>	F	A	NR	EP	31°56.558N	109°05.202W
AZ	23-Jun-03	<i>Chaetodipus baileyi</i>	F	A	NR	EP	31°56.558N	109°05.202W
AZ	23-Jun-03	<i>Chaetodipus baileyi</i>	F	SA	NR	EP	31°56.558N	109°05.202W
AZ	23-Jun-03	<i>Chaetodipus baileyi</i>	M	SA	NR	EP	31°56.558N	109°05.202W
AZ	23-Jun-03	<i>Chaetodipus baileyi</i>	M	SA	NR	EP	31°56.558N	109°05.202W
AZ	23-Jun-03	<i>Chaetodipus baileyi</i>	F	A	PL	EP	31°56.558N	109°05.202W
AZ	23-Jun-03	<i>Chaetodipus baileyi</i>	F	A	NR	PB	31°56.558N	109°05.202W
AZ	23-Jun-03	<i>Chaetodipus penicillatus</i>	F	SA	NR	EP	31°56.558N	109°05.202W
AZ	23-Jun-03	<i>Chaetodipus penicillatus</i>	M	SA	NR	EP	31°56.558N	109°05.202W
AZ	23-Jun-03	<i>Chaetodipus penicillatus</i>	M	SA	NR	EP	31°56.558N	109°05.202W
AZ	23-Jun-03	<i>Dipodomys merriami</i>	F	A	NR	EP	31°56.451N	109°05.210W
AZ	23-Jun-03	<i>Dipodomys merriami</i>	F	A	NR	EP	31°56.451N	109°05.210W
AZ	23-Jun-03	<i>Dipodomys merriami</i>	M	A	NR	EP	31°56.451N	109°05.210W
AZ	23-Jun-03	<i>Dipodomys merriami</i>	F	SA	NR	EP	31°56.451N	109°05.210W
AZ	23-Jun-03	<i>Dipodomys merriami</i>	M	SA	NR	EP	31°56.451N	109°05.210W
AZ	23-Jun-03	<i>Dipodomys merriami</i>	M	SA	NR	EP	31°56.451N	109°05.210W
AZ	23-Jun-03	<i>Dipodomys merriami</i>	M	A	S	EP	31°56.451N	109°05.210W
AZ	23-Jun-03	<i>Dipodomys merriami</i>	M	A	S	EP	31°56.451N	109°05.210W
AZ	23-Jun-03	<i>Dipodomys merriami</i>	M	A	S	EP	31°56.451N	109°05.210W
AZ	23-Jun-03	<i>Dipodomys merriami</i>	M	A	S	EP	31°56.451N	109°05.210W
AZ	23-Jun-03	<i>Dipodomys merriami</i>	M	A	S	EP	31°56.451N	109°05.210W
AZ	23-Jun-03	<i>Dipodomys merriami</i>	M	A	S	EP	31°56.451N	109°05.210W
AZ	23-Jun-03	<i>Dipodomys merriami</i>	F	A	P	EP	31°56.451N	109°05.210W
AZ	23-Jun-03	<i>Dipodomys merriami</i>	F	A	PL	EP	31°56.451N	109°05.210W
AZ	23-Jun-03	<i>Dipodomys merriami</i>	M	A	S	PB	31°56.451N	109°05.210W
AZ	23-Jun-03	<i>Dipodomys merriami</i>	M	A	S	PB	31°56.451N	109°05.210W
AZ	23-Jun-03	<i>Dipodomys merriami</i>	M	A	S	PB	31°56.451N	109°05.210W
AZ	23-Jun-03	<i>Dipodomys merriami</i>	M	A	S	PB	31°56.451N	109°05.210W
AZ	23-Jun-03	<i>Dipodomys merriami</i>	M	A	S	PB	31°56.451N	109°05.210W
AZ	23-Jun-03	<i>Dipodomys merriami</i>	M	A	S	PB	31°56.451N	109°05.210W
AZ	23-Jun-03	<i>Dipodomys merriami</i>	F	A	P	PB	31°56.451N	109°05.210W
AZ	23-Jun-03	<i>Dipodomys merriami</i>	M	A	NR	EP	31°56.558N	109°05.202W
AZ	23-Jun-03	<i>Dipodomys merriami</i>	M	A	S	EP	31°56.558N	109°05.202W
AZ	23-Jun-03	<i>Dipodomys merriami</i>	F	A	P	EP	31°56.558N	109°05.202W
AZ	23-Jun-03	<i>Dipodomys merriami</i>	F	A	P	EP	31°56.558N	109°05.202W
AZ	23-Jun-03	<i>Dipodomys merriami</i>	F	A	NR	PB	31°56.558N	109°05.202W
AZ	23-Jun-03	<i>Dipodomys merriami</i>	F	A	PL	PB	31°56.558N	109°05.202W
AZ	23-Jun-03	<i>Dipodomys ordii</i>	F	A	PL	EP	31°56.558N	109°05.202W

AZ	23-Jun-03	<i>Dipodomys ordii</i>	M	A	S	PB	31°56.558N	109°05.202W
AZ	23-Jun-03	<i>Dipodomys ordii</i>	M	A	S	PB	31°56.558N	109°05.202W
AZ	23-Jun-03	<i>Onychomys torridus</i>	F	A	L	EP	31°56.558N	109°05.202W
AZ	23-Jun-03	<i>Onychomys torridus</i>	M	A	S	PB	31°56.558N	109°05.202W
AZ	23-Jun-03	<i>Peromyscus eremicus</i>	F	A	PL	PB	31°56.451N	109°05.210W
AZ	24-Jun-03	<i>Chaetodipus baileyi</i>	M	A	NR	EP	31°53.823N	109°05.265W
AZ	24-Jun-03	<i>Chaetodipus baileyi</i>	F	SA	NR	EP	31°53.823N	109°05.265W
AZ	24-Jun-03	<i>Chaetodipus baileyi</i>	-	SA	-	EP	31°54.006N	109°05.263W
AZ	24-Jun-03	<i>Chaetodipus baileyi</i>	F	A	NR	PB	31°54.006N	109°05.263W
AZ	24-Jun-03	<i>Chaetodipus penicillatus</i>	F	SA	NR	EP	31°53.823N	109°05.265W
AZ	24-Jun-03	<i>Dipodomys merriami</i>	F	A	NR	EP	31°53.823N	109°05.265W
AZ	24-Jun-03	<i>Dipodomys merriami</i>	F	A	NR	EP	31°53.823N	109°05.265W
AZ	24-Jun-03	<i>Dipodomys merriami</i>	F	A	NR	EP	31°53.823N	109°05.265W
AZ	24-Jun-03	<i>Dipodomys merriami</i>	F	SA	NR	EP	31°53.823N	109°05.265W
AZ	24-Jun-03	<i>Dipodomys merriami</i>	M	A	S	EP	31°53.823N	109°05.265W
AZ	24-Jun-03	<i>Dipodomys merriami</i>	M	A	S	EP	31°53.823N	109°05.265W
AZ	24-Jun-03	<i>Dipodomys merriami</i>	F	A	PL	EP	31°53.823N	109°05.265W
AZ	24-Jun-03	<i>Dipodomys merriami</i>	F	A	PL	EP	31°53.823N	109°05.265W
AZ	24-Jun-03	<i>Dipodomys merriami</i>	F	A	NR	PB	31°53.823N	109°05.265W
AZ	24-Jun-03	<i>Dipodomys merriami</i>	M	A	S	PB	31°53.823N	109°05.265W
AZ	24-Jun-03	<i>Dipodomys merriami</i>	M	A	S	PB	31°53.823N	109°05.265W
AZ	24-Jun-03	<i>Dipodomys merriami</i>	M	A	S	PB	31°53.823N	109°05.265W
AZ	24-Jun-03	<i>Dipodomys merriami</i>	F	A	NR	EP	31°54.006N	109°05.263W
AZ	24-Jun-03	<i>Dipodomys merriami</i>	F	A	NR	EP	31°54.006N	109°05.263W
AZ	24-Jun-03	<i>Dipodomys merriami</i>	M	A	S	EP	31°54.006N	109°05.263W
AZ	24-Jun-03	<i>Dipodomys merriami</i>	M	A	S	EP	31°54.006N	109°05.263W
AZ	24-Jun-03	<i>Dipodomys merriami</i>	M	A	S	EP	31°54.006N	109°05.263W
AZ	24-Jun-03	<i>Dipodomys merriami</i>	M	A	S	EP	31°54.006N	109°05.263W
AZ	24-Jun-03	<i>Dipodomys merriami</i>	F	A	NR	PB	31°54.006N	109°05.263W
AZ	24-Jun-03	<i>Dipodomys merriami</i>	M	A	S	PB	31°54.006N	109°05.263W
AZ	24-Jun-03	<i>Dipodomys merriami</i>	F	A	L	PB	31°54.006N	109°05.263W
AZ	24-Jun-03	<i>Dipodomys spectabilis</i>	M	A	S	EP	31°54.006N	109°05.263W
AZ	24-Jun-03	<i>Neotoma albigula</i>	F	SA	NR	EP	31°53.823N	109°05.265W
AZ	24-Jun-03	<i>Neotoma albigula</i>	F	A	L	EP	31°53.823N	109°05.265W
AZ	24-Jun-03	<i>Onychomys torridus</i>	F	SA	NR	PB	31°54.006N	109°05.263W
AZ	24-Jun-03	<i>Perognathus flavus</i>	F	A	NR	EP	31°53.823N	109°05.265W
AZ	24-Jun-03	<i>Peromyscus eremicus</i>	F	A	L	PB	31°53.823N	109°05.265W
AZ	24-Jun-03	<i>Peromyscus eremicus</i>	M	A	S	EP	31°54.006N	109°05.263W

AZ	25-Jun-03	<i>Chaetodipus baileyi</i>	F	A	NR	EP	31°56.707N	109°05.252W
AZ	25-Jun-03	<i>Chaetodipus baileyi</i>	F	A	PL	EP	31°56.707N	109°05.252W
AZ	25-Jun-03	<i>Chaetodipus baileyi</i>	F	A	NR	PB	31°56.707N	109°05.252W
AZ	25-Jun-03	<i>Chaetodipus baileyi</i>	F	A	NR	PB	31°56.707N	109°05.252W
AZ	25-Jun-03	<i>Chaetodipus baileyi</i>	F	SA	NR	PB	31°56.707N	109°05.252W
AZ	25-Jun-03	<i>Chaetodipus penicillatus</i>	F	A	PL	PB	31°56.707N	109°05.252W
AZ	25-Jun-03	<i>Dipodomys merriami</i>	F	A	NR	EP	31°56.707N	109°05.252W
AZ	25-Jun-03	<i>Dipodomys merriami</i>	F	A	NR	EP	31°56.707N	109°05.252W
AZ	25-Jun-03	<i>Dipodomys merriami</i>	M	A	NR	EP	31°56.707N	109°05.252W
AZ	25-Jun-03	<i>Dipodomys merriami</i>	M	A	NR	EP	31°56.707N	109°05.252W
AZ	25-Jun-03	<i>Dipodomys merriami</i>	M	A	NR	EP	31°56.707N	109°05.252W
AZ	25-Jun-03	<i>Dipodomys merriami</i>	F	SA	NR	EP	31°56.707N	109°05.252W
AZ	25-Jun-03	<i>Dipodomys merriami</i>	M	A	S	EP	31°56.707N	109°05.252W
AZ	25-Jun-03	<i>Dipodomys merriami</i>	M	A	S	EP	31°56.707N	109°05.252W
AZ	25-Jun-03	<i>Dipodomys merriami</i>	M	A	S	EP	31°56.707N	109°05.252W
AZ	25-Jun-03	<i>Dipodomys merriami</i>	M	A	S	EP	31°56.707N	109°05.252W
AZ	25-Jun-03	<i>Dipodomys merriami</i>	M	A	S	EP	31°56.707N	109°05.252W
AZ	25-Jun-03	<i>Dipodomys merriami</i>	M	A	S	EP	31°56.707N	109°05.252W
AZ	25-Jun-03	<i>Dipodomys merriami</i>	F	A	L	EP	31°56.707N	109°05.252W
AZ	25-Jun-03	<i>Dipodomys merriami</i>	F	A	L	EP	31°56.707N	109°05.252W
AZ	25-Jun-03	<i>Dipodomys merriami</i>	F	A	L	EP	31°56.707N	109°05.252W
AZ	25-Jun-03	<i>Dipodomys merriami</i>	F	A	PL	EP	31°56.707N	109°05.252W
AZ	25-Jun-03	<i>Dipodomys merriami</i>	F	A	PL	EP	31°56.707N	109°05.252W
AZ	25-Jun-03	<i>Dipodomys merriami</i>	F	A	NR	PB	31°56.707N	109°05.252W
AZ	25-Jun-03	<i>Dipodomys merriami</i>	M	A	NR	PB	31°56.707N	109°05.252W
AZ	25-Jun-03	<i>Dipodomys merriami</i>	M	A	NR	PB	31°56.707N	109°05.252W
AZ	25-Jun-03	<i>Dipodomys merriami</i>	F	SA	NR	PB	31°56.707N	109°05.252W
AZ	25-Jun-03	<i>Dipodomys merriami</i>	F	SA	NR	PB	31°56.707N	109°05.252W
AZ	25-Jun-03	<i>Dipodomys merriami</i>	M	A	S	PB	31°56.707N	109°05.252W
AZ	25-Jun-03	<i>Dipodomys merriami</i>	M	A	S	PB	31°56.707N	109°05.252W
AZ	25-Jun-03	<i>Dipodomys merriami</i>	M	A	S	PB	31°56.707N	109°05.252W
AZ	25-Jun-03	<i>Dipodomys merriami</i>	M	A	S	PB	31°56.707N	109°05.252W
AZ	25-Jun-03	<i>Dipodomys merriami</i>	M	A	S	PB	31°56.707N	109°05.252W
AZ	25-Jun-03	<i>Dipodomys merriami</i>	F	A	P	PB	31°56.707N	109°05.252W
AZ	25-Jun-03	<i>Dipodomys merriami</i>	F	A	L	PB	31°56.707N	109°05.252W
AZ	25-Jun-03	<i>Neotoma albigula</i>	F	A	NR	PB	31°56.707N	109°05.252W
AZ	25-Jun-03	<i>Onychomys torridus</i>	F	SA	NR	EP	31°56.707N	109°05.252W
AZ	25-Jun-03	<i>Onychomys torridus</i>	M	A	S	PB	31°56.707N	109°05.252W
AZ	25-Jun-03	<i>Onychomys torridus</i>	M	A	S	PB	31°56.707N	109°05.252W
AZ	25-Jun-03	<i>Onychomys torridus</i>	M	A	S	PB	31°56.707N	109°05.252W

AZ	25-Jun-03	<i>Onychomys torridus</i>	F	A	P	PB	31°56.707N	109°05.252W
AZ	25-Jun-03	<i>Peromyscus eremicus</i>	F	A	P	EP	31°56.707N	109°05.252W
AZ	26-Jun-03	<i>Chaetodipus baileyi</i>	F	SA	NR	EP	31°56.891N	109°05.251W
AZ	26-Jun-03	<i>Chaetodipus baileyi</i>	F	A	NR	PB	31°56.891N	109°05.251W
AZ	26-Jun-03	<i>Chaetodipus baileyi</i>	M	A	NR	PB	31°56.891N	109°05.251W
AZ	26-Jun-03	<i>Chaetodipus baileyi</i>	F	SA	NR	EP	31°56.934N	109°05.251W
AZ	26-Jun-03	<i>Chaetodipus baileyi</i>	M	SA	NR	PB	31°56.934N	109°05.251W
AZ	26-Jun-03	<i>Chaetodipus penicillatus</i>	F	A	NR	EP	31°56.891N	109°05.251W
AZ	26-Jun-03	<i>Chaetodipus penicillatus</i>	M	A	NR	EP	31°56.891N	109°05.251W
AZ	26-Jun-03	<i>Chaetodipus penicillatus</i>	M	SA	NR	EP	31°56.891N	109°05.251W
AZ	26-Jun-03	<i>Chaetodipus penicillatus</i>	M	SA	NR	EP	31°56.891N	109°05.251W
AZ	26-Jun-03	<i>Chaetodipus penicillatus</i>	M	SA	NR	PB	31°56.891N	109°05.251W
AZ	26-Jun-03	<i>Chaetodipus penicillatus</i>	F	A	PL	PB	31°56.891N	109°05.251W
AZ	26-Jun-03	<i>Chaetodipus penicillatus</i>	F	SA	NR	EP	31°56.934N	109°05.251W
AZ	26-Jun-03	<i>Chaetodipus penicillatus</i>	M	SA	NR	EP	31°56.934N	109°05.251W
AZ	26-Jun-03	<i>Chaetodipus penicillatus</i>	F	SA	NR	EP	31°56.934N	109°05.251W
AZ	26-Jun-03	<i>Chaetodipus penicillatus</i>	M	SA	NR	EP	31°56.934N	109°05.251W
AZ	26-Jun-03	<i>Dipodomys merriami</i>	-	A	-	EP	31°56.891N	109°05.251W
AZ	26-Jun-03	<i>Dipodomys merriami</i>	F	A	NR	EP	31°56.891N	109°05.251W
AZ	26-Jun-03	<i>Dipodomys merriami</i>	F	A	NR	EP	31°56.891N	109°05.251W
AZ	26-Jun-03	<i>Dipodomys merriami</i>	F	A	NR	EP	31°56.891N	109°05.251W
AZ	26-Jun-03	<i>Dipodomys merriami</i>	F	A	NR	EP	31°56.891N	109°05.251W
AZ	26-Jun-03	<i>Dipodomys merriami</i>	F	A	NR	EP	31°56.891N	109°05.251W
AZ	26-Jun-03	<i>Dipodomys merriami</i>	F	A	NR	EP	31°56.891N	109°05.251W
AZ	26-Jun-03	<i>Dipodomys merriami</i>	F	A	NR	EP	31°56.891N	109°05.251W
AZ	26-Jun-03	<i>Dipodomys merriami</i>	M	A	NR	EP	31°56.891N	109°05.251W
AZ	26-Jun-03	<i>Dipodomys merriami</i>	M	A	NR	EP	31°56.891N	109°05.251W
AZ	26-Jun-03	<i>Dipodomys merriami</i>	F	SA	NR	EP	31°56.891N	109°05.251W
AZ	26-Jun-03	<i>Dipodomys merriami</i>	M	SA	NR	EP	31°56.891N	109°05.251W
AZ	26-Jun-03	<i>Dipodomys merriami</i>	M	SA	NR	EP	31°56.891N	109°05.251W
AZ	26-Jun-03	<i>Dipodomys merriami</i>	F	SA	NR	EP	31°56.891N	109°05.251W
AZ	26-Jun-03	<i>Dipodomys merriami</i>	M	SA	NR	EP	31°56.891N	109°05.251W
AZ	26-Jun-03	<i>Dipodomys merriami</i>	M	A	S	EP	31°56.891N	109°05.251W
AZ	26-Jun-03	<i>Dipodomys merriami</i>	M	A	S	EP	31°56.891N	109°05.251W
AZ	26-Jun-03	<i>Dipodomys merriami</i>	M	A	S	EP	31°56.891N	109°05.251W
AZ	26-Jun-03	<i>Dipodomys merriami</i>	M	A	S	EP	31°56.891N	109°05.251W
AZ	26-Jun-03	<i>Dipodomys merriami</i>	M	A	S	EP	31°56.891N	109°05.251W
AZ	26-Jun-03	<i>Dipodomys merriami</i>	M	A	S	EP	31°56.891N	109°05.251W
AZ	26-Jun-03	<i>Dipodomys merriami</i>	M	A	S	EP	31°56.891N	109°05.251W
AZ	26-Jun-03	<i>Dipodomys merriami</i>	M	A	S	EP	31°56.891N	109°05.251W
AZ	26-Jun-03	<i>Dipodomys merriami</i>	M	A	S	EP	31°56.891N	109°05.251W

AZ	26-Jun-03	<i>Dipodomys merriami</i>	M	A	S	PB	31°56.934N	109°05.251W
AZ	26-Jun-03	<i>Dipodomys ordii</i>	M	SA	NR	EP	31°56.934N	109°05.251W
AZ	26-Jun-03	<i>Dipodomys ordii</i>	M	A	S	EP	31°56.934N	109°05.251W
AZ	26-Jun-03	<i>Dipodomys ordii</i>	M	A	S	PB	31°56.934N	109°05.251W
AZ	26-Jun-03	<i>Dipodomys ordii</i>	M	A	S	PB	31°56.934N	109°05.251W
AZ	26-Jun-03	<i>Dipodomys ordii</i>	M	A	S	PB	31°56.934N	109°05.251W
AZ	26-Jun-03	<i>Dipodomys spectabilis</i>	F	SA	NR	EP	31°56.891N	109°05.251W
AZ	26-Jun-03	<i>Onychomys torridus</i>	F	SA	NR	EP	31°56.891N	109°05.251W
AZ	26-Jun-03	<i>Onychomys torridus</i>	M	A	S	EP	31°56.891N	109°05.251W
AZ	26-Jun-03	<i>Onychomys torridus</i>	F	A	P	EP	31°56.891N	109°05.251W
AZ	26-Jun-03	<i>Onychomys torridus</i>	M	SA	NR	PB	31°56.891N	109°05.251W
AZ	26-Jun-03	<i>Onychomys torridus</i>	M	A	S	PB	31°56.891N	109°05.251W
AZ	26-Jun-03	<i>Onychomys torridus</i>	M	A	S	PB	31°56.891N	109°05.251W
AZ	26-Jun-03	<i>Onychomys torridus</i>	M	A	S	PB	31°56.891N	109°05.251W
AZ	26-Jun-03	<i>Onychomys torridus</i>	M	A	S	PB	31°56.891N	109°05.251W
AZ	26-Jun-03	<i>Onychomys torridus</i>	F	A	P	PB	31°56.891N	109°05.251W
AZ	26-Jun-03	<i>Onychomys torridus</i>	F	A	P	PB	31°56.891N	109°05.251W
AZ	26-Jun-03	<i>Onychomys torridus</i>	F	A	P	PB	31°56.891N	109°05.251W
AZ	26-Jun-03	<i>Onychomys torridus</i>	M	A	S	EP	31°56.934N	109°05.251W
AZ	26-Jun-03	<i>Onychomys torridus</i>	M	SA	S	EP	31°56.934N	109°05.251W
AZ	26-Jun-03	<i>Onychomys torridus</i>	F	A	P	EP	31°56.934N	109°05.251W
AZ	26-Jun-03	<i>Onychomys torridus</i>	M	A	S	PB	31°56.934N	109°05.251W
AZ	26-Jun-03	<i>Onychomys torridus</i>	M	A	S	PB	31°56.934N	109°05.251W
AZ	26-Jun-03	<i>Onychomys torridus</i>	F	A	P	PB	31°56.934N	109°05.251W
AZ	26-Jun-03	<i>Perognathus flavus</i>	M	SA	NR	EP	31°56.891N	109°05.251W
AZ	26-Jun-03	<i>Peromyscus eremicus</i>	F	A	P	PB	31°56.891N	109°05.251W
AZ	26-Jun-03	<i>Peromyscus eremicus</i>	F	A	P	PB	31°56.891N	109°05.251W
AZ	26-Jun-03	<i>Peromyscus eremicus</i>	F	A	P	PB	31°56.891N	109°05.251W
AZ	26-Jun-03	<i>Peromyscus eremicus</i>	M	A	S	EP	31°56.934N	109°05.251W
AZ	26-Jun-03	<i>Peromyscus eremicus</i>	F	SA	P	EP	31°56.934N	109°05.251W
CCNHP	30-Jun-03	<i>Dipodomys spectabilis</i>	F	A	NR	EP	E0236246	N3989956
CCNHP	30-Jun-03	<i>Neotoma albigula</i>	F	A	NR	EP	E0236389	N3990635
CCNHP	30-Jun-03	<i>Onychomys leucogaster</i>	F	A	NR	EP	E0236246	N3989956
CCNHP	30-Jun-03	<i>Onychomys leucogaster</i>	M	A	S	EP	E0236389	N3990635
CCNHP	30-Jun-03	<i>Onychomys leucogaster</i>	M	A	S	PB	E0236389	N3990635
CCNHP	30-Jun-03	<i>Onychomys leucogaster</i>	F	A	L	PB	E0236389	N3990635
CCNHP	30-Jun-03	<i>Peromyscus maniculatus</i>	M	A	NR	EP	E0236389	N3990635
CCNHP	30-Jun-03	<i>Peromyscus maniculatus</i>	F	A	P	EP	E0236389	N3990635
CCNHP	1-Jul-03	<i>Dipodomys ordii</i>	F	SA	NR	EP	E0241226	N3992559
CCNHP	1-Jul-03	<i>Onychomys leucogaster</i>	F	A	PL	EP	E0241226	N3992559
CCNHP	1-Jul-03	<i>Onychomys leucogaster</i>	F	SA	NR	PB	E0241226	N3992559

CCNHP	1-Jul-03	<i>Onychomys leucogaster</i>	M	A	S	PB	E0241226	N3992559
CCNHP	2-Jul-03	<i>Onychomys leucogaster</i>	M	A	NR	EP	E0232389	N3992890
CCNHP	2-Jul-03	<i>Onychomys leucogaster</i>	F	A	NR	PB	E0232389	N3992890
CCNHP	2-Jul-03	<i>Onychomys leucogaster</i>	M	A	S	PB	E0232389	N3992890
CCNHP	2-Jul-03	<i>Perognathus flavus</i>	F	A	NR	EP	E0232389	N3992890
CCNHP	2-Jul-03	<i>Peromyscus maniculatus</i>	F	SA	NR	EP	E0232264	N3992885
CCNHP	2-Jul-03	<i>Peromyscus maniculatus</i>	F	A	PL	PB	E0232264	N3992885
CCNHP	2-Jul-03	<i>Peromyscus maniculatus</i>	F	A	NR	EP	E0232389	N3992890
CCNHP	2-Jul-03	<i>Peromyscus maniculatus</i>	M	A	NR	EP	E0232389	N3992890
CCNHP	2-Jul-03	<i>Peromyscus maniculatus</i>	F	SA	NR	EP	E0232389	N3992890
CCNHP	2-Jul-03	<i>Peromyscus maniculatus</i>	F	A	P	EP	E0232389	N3992890
CCNHP	6-Jul-03	<i>Onychomys leucogaster</i>	F	A	NR	EP	E0240531	N3990659
CCNHP	6-Jul-03	<i>Perognathus flavus</i>	M	A	NR	EP	E0240531	N3990659
CCNHP	6-Jul-03	<i>Perognathus flavus</i>	F	SA	NR	PB	E0240531	N3990659
CCNHP	6-Jul-03	<i>Peromyscus maniculatus</i>	F	A	P	PB	E0240531	N3990659
CCNHP	7-Jul-03	<i>Dipodomys spectabilis</i>	F	A	NR	PB	E0237727	N3995303
CCNHP	7-Jul-03	<i>Onychomys leucogaster</i>	F	SA	NR	EP	E0237727	N3995303
CCNHP	7-Jul-03	<i>Onychomys leucogaster</i>	M	A	S	EP	E0237727	N3995303
CCNHP	7-Jul-03	<i>Onychomys leucogaster</i>	F	A	NR	PB	E0237727	N3995303
CCNHP	7-Jul-03	<i>Onychomys leucogaster</i>	M	A	S	PB	E0237727	N3995303
CCNHP	7-Jul-03	<i>Onychomys leucogaster</i>	M	A	S	PB	E0237727	N3995303
CCNHP	7-Jul-03	<i>Peromyscus maniculatus</i>	F	SA	NR	EP	E0237727	N3995303
RP	12-Jul-03	<i>Microtus longicaudus</i>	F	A	NR	EP	36°08.124N	105°28.901W
RP	12-Jul-03	<i>Microtus longicaudus</i>	M	SA	NR	EP	36°08.124N	105°28.901W
RP	12-Jul-03	<i>Microtus longicaudus</i>	M	SA	NR	PB	36°08.124N	105°28.901W
RP	12-Jul-03	<i>Microtus longicaudus</i>	M	A	S	PB	36°08.124N	105°28.901W
RP	12-Jul-03	<i>Microtus longicaudus</i>	M	A	S	PB	36°08.124N	105°28.901W
RP	12-Jul-03	<i>Peromyscus maniculatus</i>	F	SA	NR	EP	36°08.124N	105°28.901W
RP	12-Jul-03	<i>Peromyscus maniculatus</i>	M	A	S	EP	36°08.124N	105°28.901W
RP	12-Jul-03	<i>Peromyscus maniculatus</i>	-	-	-	PB	36°08.124N	105°28.901W
RP	12-Jul-03	<i>Peromyscus maniculatus</i>	M	SA	NR	PB	36°08.124N	105°28.901W
RP	12-Jul-03	<i>Sorex sp.</i>	-	A		EP	36°08.124N	105°28.901W
RP	12-Jul-03	<i>Zapus princeps</i>	F	A	NR	EP	36°08.124N	105°28.901W
RP	12-Jul-03	<i>Zapus princeps</i>	M	A	NR	EP	36°08.124N	105°28.901W
RP	12-Jul-03	<i>Zapus princeps</i>	M	A	NR	EP	36°08.124N	105°28.901W
RP	12-Jul-03	<i>Zapus princeps</i>	F	A	P	EP	36°08.124N	105°28.901W
RP	12-Jul-03	<i>Zapus princeps</i>	M	A	NR	PB	36°08.124N	105°28.901W
RP	13-Jul-03	<i>Microtus longicaudus</i>	M	A	NR	EP	36°10.071N	105°27.210W
RP	13-Jul-03	<i>Microtus longicaudus</i>	M	SA	NR	EP	36°10.071N	105°27.210W
RP	13-Jul-03	<i>Microtus longicaudus</i>	F	SA	NR	EP	36°10.071N	105°27.210W

RP	13-Jul-03	<i>Microtus longicaudus</i>	F	SA	NR	EP	36°10.071N	105°27.210W
RP	13-Jul-03	<i>Microtus longicaudus</i>	F	A	P	EP	36°10.071N	105°27.210W
RP	13-Jul-03	<i>Microtus longicaudus</i>	F	A	P	EP	36°10.071N	105°27.210W
RP	13-Jul-03	<i>Microtus longicaudus</i>	F	A	NR	PB	36°10.071N	105°27.210W
RP	13-Jul-03	<i>Microtus longicaudus</i>	M	A	NR	PB	36°10.071N	105°27.210W
RP	13-Jul-03	<i>Microtus longicaudus</i>	M	A	NR	PB	36°10.071N	105°27.210W
RP	13-Jul-03	<i>Microtus longicaudus</i>	F	SA	NR	PB	36°10.071N	105°27.210W
RP	13-Jul-03	<i>Microtus longicaudus</i>	M	SA	NR	PB	36°10.071N	105°27.210W
RP	13-Jul-03	<i>Microtus longicaudus</i>	F	SA	NR	PB	36°10.071N	105°27.210W
RP	13-Jul-03	<i>Microtus longicaudus</i>	F	SA	NR	PB	36°10.071N	105°27.210W
RP	13-Jul-03	<i>Microtus longicaudus</i>	F	A	L	PB	36°10.071N	105°27.210W
RP	13-Jul-03	<i>Peromyscus maniculatus</i>	F	A	NR	EP	36°10.071N	105°27.210W
RP	13-Jul-03	<i>Peromyscus maniculatus</i>	F	A	P	EP	36°10.071N	105°27.210W
RP	13-Jul-03	<i>Peromyscus maniculatus</i>	M	A	S	PB	36°10.071N	105°27.210W
RP	13-Jul-03	<i>Peromyscus maniculatus</i>	F	A	P	PB	36°10.071N	105°27.210W
RP	13-Jul-03	<i>Tamias minimus</i>	F	A	L	PB	36°10.071N	105°27.210W
RP	13-Jul-03	<i>Zapus princeps</i>	M	A	NR	EP	36°10.071N	105°27.210W
RP	13-Jul-03	<i>Zapus princeps</i>	F	A	NR	PB	36°10.071N	105°27.210W
RP	13-Jul-03	<i>Zapus princeps</i>	M	A	NR	PB	36°10.071N	105°27.210W
RP	14-Jul-03	<i>Microtus longicaudus</i>	M	A	NR	EP	36°09.998N	105°27.260W
RP	14-Jul-03	<i>Microtus longicaudus</i>	M	SA	NR	EP	36°09.998N	105°27.260W
RP	14-Jul-03	<i>Microtus longicaudus</i>	F	SA	NR	EP	36°09.998N	105°27.260W
RP	14-Jul-03	<i>Microtus longicaudus</i>	M	A	S	EP	36°09.998N	105°27.260W
RP	14-Jul-03	<i>Microtus longicaudus</i>	F	A	PL	EP	36°09.998N	105°27.260W
RP	14-Jul-03	<i>Microtus longicaudus</i>	F	A	NR	PB	36°09.998N	105°27.260W
RP	14-Jul-03	<i>Microtus longicaudus</i>	M	A	NR	PB	36°09.998N	105°27.260W
RP	14-Jul-03	<i>Microtus longicaudus</i>	M	A	NR	PB	36°09.998N	105°27.260W
RP	14-Jul-03	<i>Microtus longicaudus</i>	F	SA	NR	PB	36°09.998N	105°27.260W
RP	14-Jul-03	<i>Microtus longicaudus</i>	M	SA	NR	PB	36°09.998N	105°27.260W
RP	14-Jul-03	<i>Sorex sp.</i>	-	-	-	PB	36°09.998N	105°27.260W
RP	14-Jul-03	<i>Zapus princeps</i>	F	A	NR	EP	36°09.998N	105°27.260W
RP	14-Jul-03	<i>Zapus princeps</i>	M	A	S	EP	36°09.998N	105°27.260W
RP	14-Jul-03	<i>Zapus princeps</i>	M	A	NR	PB	36°09.998N	105°27.260W
EMPNM	17-Jul-03	<i>Dipodomys ordii</i>	M	A	S	EP	E0233868	N3856173
EMPNM	17-Jul-03	<i>Dipodomys ordii</i>	F	A	L	EP	E0233868	N3856173
EMPNM	17-Jul-03	<i>Dipodomys ordii</i>	M	A	S	PB	E0233868	N3856173
EMPNM	17-Jul-03	<i>Onychomys leucogaster</i>	F	A	P	PB	E0233868	N3856173
EMPNM	17-Jul-03	<i>Perognathus flavescens</i>	F	A	NR	EP	E0233868	N3856173
EMPNM	17-Jul-03	<i>Perognathus flavus</i>	M	A	NR	EP	E0233868	N3856173

EMPNM	17-Jul-03	<i>Perognathus flavus</i>	F	SA	NR	EP	E0233868	N3856173
EMPNM	17-Jul-03	<i>Perognathus flavus</i>	F	SA	NR	EP	E0233868	N3856173
EMPNM	17-Jul-03	<i>Perognathus flavus</i>	F	A	L	EP	E0233868	N3856173
EMPNM	17-Jul-03	<i>Perognathus flavus</i>	M	A	NR	PB	E0233868	N3856173
EMPNM	17-Jul-03	<i>Perognathus flavus</i>	F	SA	NR	PB	E0233868	N3856173
EMPNM	17-Jul-03	<i>Perognathus flavus</i>	M	SA	NR	PB	E0233868	N3856173
EMPNM	17-Jul-03	<i>Perognathus flavus</i>	F	A	P	PB	E0233868	N3856173
EMPNM	17-Jul-03	<i>Peromyscus maniculatus</i>	M	A	S	EP	E0233868	N3856173
EMPNM	18-Jul-03	<i>Neotoma mexicana</i>	M	A	NR	PB	E0233567	N3858816
EMPNM	18-Jul-03	<i>Neotoma microtus</i>	F	A	P	EP	E0233567	N3858816
EMPNM	18-Jul-03	<i>Peromyscus maniculatus</i>	F	A	NR	EP	E0233567	N3858816
EMPNM	18-Jul-03	<i>Peromyscus nasutus</i>	M	SA	NR	EP	E0233567	N3858816
EMPNM	18-Jul-03	<i>Peromyscus trueii</i>	M	A	S	PB	E0233567	N3858816
EMPNM	19-Jul-03	<i>Onychomys leucogaster</i>	F	A	NR	PB	E0243970	N3874694
EMPNM	19-Jul-03	<i>Perognathus flavus</i>	M	A	S	EP	E0243970	N3874694
EMPNM	19-Jul-03	<i>Perognathus flavus</i>	F	A	PL	EP	E0243970	N3874694
EMPNM	19-Jul-03	<i>Perognathus flavus</i>	M	A	S	PB	E0243970	N3874694
EMPNM	19-Jul-03	<i>Perognathus flavus</i>	M	A	S	PB	E0243970	N3874694
EMPNM	19-Jul-03	<i>Perognathus flavus</i>	M	A	S	PB	E0243970	N3874694
EMPNM	19-Jul-03	<i>Peromyscus maniculatus</i>	M	A	S	PB	E0243288	N3875804
EMPNM	19-Jul-03	<i>Peromyscus maniculatus</i>	M	A	S	EP	E0243970	N3874694
EMPNM	19-Jul-03	<i>Peromyscus maniculatus</i>	F	A	L	PB	E0243970	N3874694
EMPNM	19-Jul-03	<i>Peromyscus nasutus</i>	F	A	NR	EP	E0243288	N3875804
EMPNM	19-Jul-03	<i>Peromyscus nasutus</i>	F	SA	NR	EP	E0243288	N3875804
EMPNM	19-Jul-03	<i>Peromyscus nasutus</i>	M	SA	NR	EP	E0243288	N3875804
EMPNM	19-Jul-03	<i>Peromyscus nasutus</i>	M	SA	NR	EP	E0243288	N3875804
EMPNM	19-Jul-03	<i>Peromyscus nasutus</i>	.	SA	.	PB	E0243288	N3875804
EMPNM	19-Jul-03	<i>Reithrodontomys megalotis</i>	M	A	S	PB	E0243970	N3874694
EMPNM	21-Jul-03	<i>Dipodomys ordii</i>	F	A	PL	EP	E0242011	N3889900
EMPNM	21-Jul-03	<i>Neotoma albigula</i>	M	A	NR	PB	E0242011	N3889900
EMPNM	21-Jul-03	<i>Neotoma albigula</i>	F	A	NR	EP	E0242399	N3889989
EMPNM	21-Jul-03	<i>Neotoma albigula</i>	F	SA	NR	EP	E0242399	N3889989
EMPNM	21-Jul-03	<i>Neotoma albigula</i>	F	SA	NR	EP	E0242399	N3889989
EMPNM	21-Jul-03	<i>Neotoma albigula</i>	F	SA	NR	EP	E0242399	N3889989
EMPNM	21-Jul-03	<i>Neotoma albigula</i>	F	A	L	EP	E0242399	N3889989
EMPNM	21-Jul-03	<i>Neotoma albigula</i>	F	A	PL	EP	E0242399	N3889989
EMPNM	21-Jul-03	<i>Neotoma albigula</i>	M	A	NR	PB	E0242399	N3889989
EMPNM	21-Jul-03	<i>Neotoma albigula</i>	F	A	L	PB	E0242399	N3889989
EMPNM	21-Jul-03	<i>Neotoma albigula</i>	F	A	PL	PB	E0242399	N3889989
EMPNM	21-Jul-03	<i>Neotoma albigula</i>	F	A	PL	PB	E0242399	N3889989
EMPNM	21-Jul-03	<i>Peromyscus maniculatus</i>	M	A	NR	PB	E0242011	N3889900
EMPNM	21-Jul-03	<i>Peromyscus maniculatus</i>	F	A	NR	EP	E0242399	N3889989
EMPNM	21-Jul-03	<i>Peromyscus maniculatus</i>	F	A	NR	EP	E0242399	N3889989
EMPNM	21-Jul-03	<i>Peromyscus maniculatus</i>	M	A	S	EP	E0242399	N3889989
EMPNM	22-Jul-03	<i>Dipodomys ordii</i>	-	A	-	PB	E0228690	N3849016

EMPNM	22-Jul-03	<i>Dipodomys ordii</i>	M	A	NR	PB	E0228690	N3849016
EMPNM	22-Jul-03	<i>Perognathus flavescens</i>	F	A	NR	PB	E0228690	N3849016
EMPNM	22-Jul-03	<i>Peromyscus maniculatus</i>	M	A	NR	PB	E0228445	N3847924
EMPNM	22-Jul-03	<i>Peromyscus truei</i>	M	A	S	PB	E0228445	N3847924
EMPNM	22-Jul-03	<i>Peromyscus truei</i>	M	A	S	PB	E0228445	N3847924
EMPNM	22-Jul-03	<i>Peromyscus truei</i>	M	A	S	EP	E0228690	N3849016
EMPNM	22-Jul-03	<i>Peromyscus truei</i>	M	A	S	EP	E0228690	N3849016
EMPNM	22-Jul-03	<i>Peromyscus truei</i>	F	A	NR	PB	E0228690	N3849016
EMPNM	22-Jul-03	<i>Reithrodontomys megalotis</i>	M	A	S	EP	E0228690	N3849016
EMPNM	23-Jul-03	<i>Onychomys leucogaster</i>	F	SA	NR	EP	E0241610	N3870937
EMPNM	23-Jul-03	<i>Perognathus flavus</i>	M	A	NR	EP	E0240892	N3870545
EMPNM	23-Jul-03	<i>Perognathus flavus</i>	F	SA	NR	EP	E0240892	N3870545
EMPNM	23-Jul-03	<i>Perognathus flavus</i>	F	SA	NR	EP	E0240892	N3870545
EMPNM	23-Jul-03	<i>Perognathus flavus</i>	F	A	NR	PB	E0240892	N3870545
EMPNM	23-Jul-03	<i>Perognathus flavus</i>	M	A	NR	PB	E0240892	N3870545
EMPNM	23-Jul-03	<i>Perognathus flavus</i>	M	A	S	PB	E0240892	N3870545
EMPNM	23-Jul-03	<i>Perognathus flavus</i>	F	A	P	PB	E0240892	N3870545
EMPNM	23-Jul-03	<i>Perognathus flavus</i>	M	A	NR	EP	E0241610	N3870937
EMPNM	23-Jul-03	<i>Perognathus flavus</i>	M	A	S	EP	E0241610	N3870937
EMPNM	23-Jul-03	<i>Perognathus flavus</i>	F	A	P	EP	E0241610	N3870937
EMPNM	23-Jul-03	<i>Peromyscus maniculatus</i>	F	A	PL	EP	E0240892	N3870545
EMPNM	23-Jul-03	<i>Peromyscus truei</i>	M	A	NR	EP	E0240892	N3870545
EMPNM	23-Jul-03	<i>Peromyscus truei</i>	F	A	PL	EP	E0240892	N3870545
EMPNM	24-Jul-03	<i>Neotoma albigula</i>	M	A	S	EP	E0242527	N3889553
EMPNM	24-Jul-03	<i>Neotoma albigula</i>	M	A	S	EP	E0242527	N3889553
EMPNM	24-Jul-03	<i>Neotoma albigula</i>	F	A	PL	EP	E0242527	N3889553
EMPNM	24-Jul-03	<i>Neotoma albigula</i>	F	SA	NR	PB	E0242527	N3889553
EMPNM	24-Jul-03	<i>Peromyscus maniculatus</i>	M	A	NR	EP	E0242661	N3889753
EMPNM	24-Jul-03	<i>Reithrodontomys megalotis</i>	-	A	-	EP	E0242661	N3889753
EMPNM	24-Jul-03	<i>Reithrodontomys megalotis</i>	M	A	S	EP	E0242661	N3889753
EMPNM	24-Jul-03	<i>Sigmodon fulviventer</i>	F	A	NR	PB	E0242661	N3889753

Appendix 2. Data collected during summer 2003 for experiment B by location. BNM-Bandelier National Monument (Los Alamos and Sandoval Cos., New Mexico), AZ- near Portal (Cochise Co., Arizona), CCNHP- Chaco Culture National Historical Park (San Juan Co., New Mexico), RP- along Rito la Presa (Taos Co., New Mexico), EMPNM- El Mal Pais National Monument (Cibola Co., New Mexico). Reproductive condition (NR- no visual signs of reproduction, P-pregnant, L-Lactating, S- descended testes, PL- post lactating). SA indicates sub-adults and A indicates adults. Bait type indicates which trap the individual was captured in at the trap station (EP- empty pack, PB- peanut butter bait pack). The symbol (-) indicates that the given information could not be collected.

Location	Day	Species	Sex	Age	Repro	Bait	Latitude	Longitude
BNM	8-Jun-03	<i>Neotoma mexicana</i>	F	A	L	PB	E0383859	N3961879
BNM	8-Jun-03	<i>Peromyscus sp.</i>	M	A	S	PB	E0383859	N3961879
BNM	8-Jun-03	<i>Peromyscus truei</i>	F	A	NR	EP	E0383859	N3961879
BNM	8-Jun-03	<i>Peromyscus truei</i>	F	SA	NR	EP	E0383859	N3961879
BNM	8-Jun-03	<i>Peromyscus truei</i>	M	SA	NR	EP	E0383859	N3961879
BNM	8-Jun-03	<i>Tamias quadrivittatus</i>	F	A	NR	EP	E0383859	N3961879
BNM	8-Jun-03	<i>Tamias quadrivittatus</i>	F	A	NR	PB	E0383859	N3961879
BNM	9-Jun-03	<i>Neotoma mexicana</i>	M	A	NR	EP	E0385328	N3959676
BNM	9-Jun-03	<i>Peromyscus boylii</i>	F	A	L	EP	E0385059	N3959633
BNM	9-Jun-03	<i>Peromyscus boylii</i>	M	A	NR	EP	E0385059	N3959633
BNM	9-Jun-03	<i>Peromyscus boylii</i>	M	A	NR	EP	E0385059	N3959633
BNM	9-Jun-03	<i>Peromyscus boylii</i>	F	SA	NR	EP	E0385059	N3959633
BNM	9-Jun-03	<i>Peromyscus boylii</i>	F	SA	NR	EP	E0385059	N3959633
BNM	9-Jun-03	<i>Peromyscus boylii</i>	M	SA	NR	PB	E0385059	N3959633
BNM	9-Jun-03	<i>Peromyscus boylii</i>	F	A	PL	EP	E0385059	N3959633
BNM	9-Jun-03	<i>Peromyscus boylii</i>	F	A	PL	EP	E0385059	N3959633
BNM	9-Jun-03	<i>Peromyscus boylii</i>	M	A	S	EP	E0385059	N3959633
BNM	9-Jun-03	<i>Peromyscus boylii</i>	M	A	S	EP	E0385059	N3959633
BNM	9-Jun-03	<i>Peromyscus boylii</i>	M	A	S	PB	E0385059	N3959633
BNM	9-Jun-03	<i>Peromyscus boylii</i>	M	A	S	EP	E0385328	N3959676
BNM	9-Jun-03	<i>Peromyscus boylii</i>	M	A	S	EP	E0385328	N3959676
BNM	9-Jun-03	<i>Peromyscus boylii</i>	M	A	S	PB	E0385328	N3959676
BNM	9-Jun-03	<i>Peromyscus sp.</i>	F	A	L	PB	E0385328	N3959676
BNM	9-Jun-03	<i>Tamias quadrivittatus</i>	F	A	NR	EP	E0385328	N3959676
BNM	9-Jun-03	<i>Tamias quadrivittatus</i>	F	A	NR	EP	E0385328	N3959676
BNM	9-Jun-03	<i>Tamias quadrivittatus</i>	M	A	NR	PB	E0385328	N3959676
BNM	9-Jun-03	<i>Tamias quadrivittatus</i>	M	A	NR	PB	E0385328	N3959676
BNM	9-Jun-03	<i>Tamias quadrivittatus</i>	M	A	S	EP	E0385059	N3959633
BNM	9-Jun-03	<i>Tamias quadrivittatus</i>	M	A	S	EP	E0385328	N3959676
BNM	12-Jun-03	<i>Peromyscus maniculatus</i>	M	A	NR	EP	E0384799	N3961754
BNM	12-Jun-03	<i>Peromyscus maniculatus</i>	F	A	NR	PB	E0384799	N3961754
BNM	12-Jun-03	<i>Peromyscus maniculatus</i>	M	SA	NR	PB	E0384799	N3961754
BNM	13-Jun-03	<i>Neotoma albigula</i>	M	A	NR	EP	E0386026	N3959061
BNM	13-Jun-03	<i>Neotoma albigula</i>	F	A	P	PB	E0386026	N3959061
BNM	13-Jun-03	<i>Peromyscus nasutus</i>	F	A	L	EP	E0386026	N3959061
BNM	13-Jun-03	<i>Peromyscus nasutus</i>	M	A	NR	PB	E0386026	N3959061
BNM	13-Jun-03	<i>Peromyscus nasutus</i>	F	A	PL	PB	E0386026	N3959061
BNM	13-Jun-03	<i>Peromyscus nasutus</i>	M	A	S	EP	E0386026	N3959061

BNM	13-Jun-03	<i>Peromyscus nasutus</i>	M	A	S	EP	E0386026	N3959061
BNM	13-Jun-03	<i>Tamias quadrivittatus</i>	F	A	NR	PB	E0386026	N3959061
BNM	13-Jun-03	<i>Tamias quadrivittatus</i>	M	A	NR	PB	E0386026	N3959061
BNM	13-Jun-03	<i>Tamias quadrivittatus</i>	M	A	NR	PB	E0386026	N3959061
BNM	13-Jun-03	<i>Tamias quadrivittatus</i>	M	A	S	PB	E0386026	N3959061
BNM	15-Jun-03	<i>Microtus longicaudus</i>	F	SA	NR	EP	E0371242	N3967582
BNM	15-Jun-03	<i>Microtus longicaudus</i>	F	SA	NR	PB	E0371242	N3967582
BNM	15-Jun-03	<i>Neotoma mexicana</i>	F	A	PL	EP	E0371242	N3967582
BNM	15-Jun-03	<i>Neotoma mexicana</i>	M	A	S	PB	E0371242	N3967582
BNM	15-Jun-03	<i>Peromyscus maniculatus</i>	F	A	P	EP	E0371242	N3967582
BNM	15-Jun-03	<i>Peromyscus maniculatus</i>	F	A	PL	PB	E0371242	N3967582
BNM	15-Jun-03	<i>Tamias minimus</i>	F	A	L	EP	E0371242	N3967582
BNM	15-Jun-03	<i>Tamias minimus</i>	F	A	L	PB	E0371242	N3967582
BNM	15-Jun-03	<i>Tamias minimus</i>	F	A	L	PB	E0371242	N3967582
BNM	16-Jun-03	<i>Peromyscus maniculatus</i>	F	A	P	EP	E0371091	N3967207
BNM	16-Jun-03	<i>Peromyscus maniculatus</i>	F	A	P	EP	E0371091	N3967207
BNM	16-Jun-03	<i>Peromyscus maniculatus</i>	F	A	P	EP	E0371091	N3967207
BNM	16-Jun-03	<i>Peromyscus maniculatus</i>	F	A	PL	EP	E0371091	N3967207
BNM	16-Jun-03	<i>Peromyscus maniculatus</i>	F	A	PL	PB	E0371091	N3967207
BNM	16-Jun-03	<i>Peromyscus maniculatus</i>	M	SA	NR	EP	E0371091	N3967207
BNM	16-Jun-03	<i>Peromyscus maniculatus</i>	M	SA	NR	PB	E0371091	N3967207
BNM	16-Jun-03	<i>Spermophilus lateralis</i>	M	A	NR	EP	E0371091	N3967207
BNM	16-Jun-03	<i>Tamias minimus</i>	F	A	L	PB	E0371091	N3967207
BNM	16-Jun-03	<i>Tamias minimus</i>	F	A	PL	PB	E0371091	N3967207
BNM	17-Jun-03	<i>Perognathus flavus</i>	F	A	L	PB	E0385226	N3961463
BNM	19-Jun-03	<i>Microtus longicaudus</i>	F	A	NR	PB	E0370293	N3966514
BNM	19-Jun-03	<i>Neotoma mexicana</i>	F	A	L	EP	E0370293	N3966514
BNM	19-Jun-03	<i>Neotoma mexicana</i>	M	A	NR	PB	E0370293	N3966514
BNM	19-Jun-03	<i>Neotoma mexicana</i>	M	SA	NR	EP	E0370293	N3966514
BNM	19-Jun-03	<i>Neotoma mexicana</i>	F	SA	NR	EP	E0370293	N3966514
BNM	19-Jun-03	<i>Neotoma mexicana</i>	M	SA	NR	PB	E0370293	N3966514
BNM	19-Jun-03	<i>Neotoma mexicana</i>	F	A	PL	PB	E0370293	N3966514
BNM	19-Jun-03	<i>Neotoma mexicana</i>	F	A	PL	PB	E0370293	N3966514
BNM	19-Jun-03	<i>Peromyscus maniculatus</i>	F	A	NR	PB	E0370293	N3966514
BNM	19-Jun-03	<i>Peromyscus maniculatus</i>	F	A	NR	PB	E0370293	N3966514
BNM	19-Jun-03	<i>Peromyscus maniculatus</i>	F	SA	NR	PB	E0370293	N3966514
BNM	19-Jun-03	<i>Peromyscus maniculatus</i>	M	SA	NR	PB	E0370293	N3966514
BNM	19-Jun-03	<i>Peromyscus maniculatus</i>	F	A	P	EP	E0370293	N3966514
BNM	19-Jun-03	<i>Tamias minimus</i>	F	A	L	EP	E0370293	N3966514
BNM	19-Jun-03	<i>Tamias minimus</i>	M	A	NR	EP	E0370293	N3966514
BNM	19-Jun-03	<i>Tamias minimus</i>	F	A	PL	PB	E0370293	N3966514
AZ	23-Jun-03	<i>Ammospermophilus harrisi</i>	M	A	S	PB	31o56.451N	109o05.210W
AZ	22-Jun-03	<i>Chaetodipus baileyi</i>	M	A	NR	EP	31o56.094N	109o05.249W
AZ	22-Jun-03	<i>Chaetodipus baileyi</i>	F	A	NR	PB	31o56.094N	109o05.249W

AZ	23-Jun-03	<i>Onychomys torridus</i>	F	A	PL	EP	31o56.451N	109o05.210W
AZ	22-Jun-03	<i>Onychomys torridus</i>	F	A	P	EP	31o56.094N	109o05.249W
AZ	22-Jun-03	<i>Onychomys torridus</i>	F	A	P	PB	31o56.094N	109o05.249W
AZ	23-Jun-03	<i>Onychomys torridus</i>	F	A	P	PB	31o56.451N	109o05.210W
AZ	23-Jun-03	<i>Onychomys torridus</i>	F	A	P	PB	31o56.558N	109o05.202W
AZ	22-Jun-03	<i>Onychomys torridus</i>	M	A	S	PB	31o56.094N	109o05.249W
AZ	22-Jun-03	<i>Onychomys torridus</i>	M	A	S	PB	31o56.094N	109o05.249W
AZ	22-Jun-03	<i>Onychomys torridus</i>	M	A	S	PB	31o56.094N	109o05.249W
AZ	23-Jun-03	<i>Onychomys torridus</i>	M	A	S	EP	31o56.451N	109o05.210W
AZ	23-Jun-03	<i>Onychomys torridus</i>	M	A	S	PB	31o56.451N	109o05.210W
AZ	23-Jun-03	<i>Onychomys torridus</i>	M	A	S	PB	31o56.451N	109o05.210W
AZ	23-Jun-03	<i>Onychomys torridus</i>	M	A	S	PB	31o56.451N	109o05.210W
AZ	23-Jun-03	<i>Onychomys torridus</i>	M	A	S	EP	31o56.558N	109o05.202W
AZ	23-Jun-03	<i>Perognathus flavus</i>	M	A	S	EP	31o56.558N	109o05.202W
AZ	23-Jun-03	<i>Peromyscus eremicus</i>	F	A	L	PB	31o56.451N	109o05.210W
AZ	23-Jun-03	<i>Peromyscus eremicus</i>	F	A	NR	EP	31o56.451N	109o05.210W
AZ	23-Jun-03	<i>Peromyscus eremicus</i>	F	A	NR	EP	31o56.558N	109o05.202W
AZ	23-Jun-03	<i>Peromyscus eremicus</i>	F	A	PL	EP	31o56.451N	109o05.210W
AZ	22-Jun-03	<i>Peromyscus eremicus</i>	F	A	P	PB	31o56.094N	109o05.249W
AZ	22-Jun-03	<i>Peromyscus eremicus</i>	F	A	P	PB	31o56.094N	109o05.249W
AZ	22-Jun-03	<i>Peromyscus eremicus</i>	M	A	S	PB	31o56.094N	109o05.249W
AZ	23-Jun-03	<i>Peromyscus eremicus</i>	M	A	S	EP	31o56.451N	109o05.210W
AZ	23-Jun-03	<i>Peromyscus eremicus</i>	M	A	S	PB	31o56.451N	109o05.210W
AZ	23-Jun-03	<i>Peromyscus eremicus</i>	M	A	S	PB	31o56.451N	109o05.210W
AZ	23-Jun-03	<i>Peromyscus eremicus</i>	M	A	S	EP	31o56.558N	109o05.202W
AZ	23-Jun-03	<i>Peromyscus eremicus</i>	M	A	S	PB	31o56.558N	109o05.202W
AZ	24-Jun-03	<i>Ammospermophilus harrisi</i>	M	A	S	EP	31o54.006N	109o05.263W
AZ	24-Jun-03	<i>Chaetodipus baileyi</i>	F	A	NR	PB	31o54.006N	109o05.263W
AZ	24-Jun-03	<i>Chaetodipus baileyi</i>	F	A	NR	PB	31o54.006N	109o05.263W
AZ	24-Jun-03	<i>Chaetodipus baileyi</i>	M	A	NR	PB	31o54.006N	109o05.263W
AZ	24-Jun-03	<i>Chaetodipus baileyi</i>	M	A	NR	PB	31o54.006N	109o05.263W
AZ	24-Jun-03	<i>Chaetodipus baileyi</i>	M	A	S	PB	31o54.006N	109o05.263W
AZ	24-Jun-03	<i>Chaetodipus penicillatus</i>	F	A	P	EP	31o54.006N	109o05.263W
AZ	24-Jun-03	<i>Dipodomys merriami</i>	F	A	L	EP	31o53.823N	109o05.265W
AZ	24-Jun-03	<i>Dipodomys merriami</i>	F	A	NR	EP	31o53.823N	109o05.265W
AZ	24-Jun-03	<i>Dipodomys merriami</i>	F	A	NR	EP	31o53.823N	109o05.265W
AZ	24-Jun-03	<i>Dipodomys merriami</i>	F	A	NR	EP	31o53.823N	109o05.265W
AZ	24-Jun-03	<i>Dipodomys merriami</i>	F	A	NR	EP	31o53.823N	109o05.265W
AZ	24-Jun-03	<i>Dipodomys merriami</i>	F	A	NR	EP	31o53.823N	109o05.265W
AZ	24-Jun-03	<i>Dipodomys merriami</i>	F	A	NR	EP	31o53.823N	109o05.265W
AZ	24-Jun-03	<i>Dipodomys merriami</i>	F	A	NR	PB	31o53.823N	109o05.265W
AZ	24-Jun-03	<i>Dipodomys merriami</i>	F	A	NR	PB	31o53.823N	109o05.265W
AZ	24-Jun-03	<i>Dipodomys merriami</i>	F	A	NR	PB	31o53.823N	109o05.265W
AZ	24-Jun-03	<i>Dipodomys merriami</i>	F	A	NR	EP	31o54.006N	109o05.263W
AZ	24-Jun-03	<i>Dipodomys merriami</i>	F	A	NR	EP	31o54.006N	109o05.263W
AZ	24-Jun-03	<i>Dipodomys merriami</i>	F	A	NR	EP	31o54.006N	109o05.263W
AZ	24-Jun-03	<i>Dipodomys merriami</i>	F	A	NR	EP	31o54.006N	109o05.263W

AZ	24-Jun-03	<i>Dipodomys merriami</i>	F	A	NR	PB	31o54.006N	109o05.263W
AZ	24-Jun-03	<i>Dipodomys merriami</i>	F	A	NR	PB	31o54.006N	109o05.263W
AZ	24-Jun-03	<i>Dipodomys merriami</i>	F	A	NR	PB	31o54.006N	109o05.263W
AZ	24-Jun-03	<i>Dipodomys merriami</i>	M	A	NR	EP	31o53.823N	109o05.265W
AZ	24-Jun-03	<i>Dipodomys merriami</i>	M	A	NR	PB	31o54.006N	109o05.263W
AZ	24-Jun-03	<i>Dipodomys merriami</i>	F	SA	NR	EP	31o53.823N	109o05.265W
AZ	24-Jun-03	<i>Dipodomys merriami</i>	F	SA	NR	EP	31o54.006N	109o05.263W
AZ	24-Jun-03	<i>Dipodomys merriami</i>	M	SA	NR	EP	31o53.823N	109o05.265W
AZ	24-Jun-03	<i>Dipodomys merriami</i>	M	SA	NR	EP	31o54.006N	109o05.263W
AZ	24-Jun-03	<i>Dipodomys merriami</i>	F	A	PL	EP	31o53.823N	109o05.265W
AZ	24-Jun-03	<i>Dipodomys merriami</i>	F	A	PL	PB	31o53.823N	109o05.265W
AZ	24-Jun-03	<i>Dipodomys merriami</i>	F	A	P	PB	31o53.823N	109o05.265W
AZ	24-Jun-03	<i>Dipodomys merriami</i>	F	A	P	EP	31o54.006N	109o05.263W
AZ	24-Jun-03	<i>Dipodomys merriami</i>	F	A	P	EP	31o54.006N	109o05.263W
AZ	24-Jun-03	<i>Dipodomys merriami</i>	M	A	S	EP	31o53.823N	109o05.265W
AZ	24-Jun-03	<i>Dipodomys merriami</i>	M	A	S	EP	31o53.823N	109o05.265W
AZ	24-Jun-03	<i>Dipodomys merriami</i>	M	A	S	EP	31o53.823N	109o05.265W
AZ	24-Jun-03	<i>Dipodomys merriami</i>	M	A	S	EP	31o53.823N	109o05.265W
AZ	24-Jun-03	<i>Dipodomys merriami</i>	M	A	S	EP	31o53.823N	109o05.265W
AZ	24-Jun-03	<i>Dipodomys merriami</i>	M	A	S	PB	31o53.823N	109o05.265W
AZ	24-Jun-03	<i>Dipodomys merriami</i>	M	A	S	PB	31o53.823N	109o05.265W
AZ	24-Jun-03	<i>Dipodomys merriami</i>	M	A	S	EP	31o54.006N	109o05.263W
AZ	24-Jun-03	<i>Dipodomys merriami</i>	M	A	S	EP	31o54.006N	109o05.263W
AZ	24-Jun-03	<i>Dipodomys merriami</i>	M	A	S	EP	31o54.006N	109o05.263W
AZ	24-Jun-03	<i>Dipodomys merriami</i>	M	A	S	PB	31o54.006N	109o05.263W
AZ	24-Jun-03	<i>Dipodomys merriami</i>	M	A	S	PB	31o54.006N	109o05.263W
AZ	24-Jun-03	<i>Dipodomys merriami</i>	M	A	S	PB	31o54.006N	109o05.263W
AZ	24-Jun-03	<i>Dipodomys ordii</i>	F	A	PL	PB	31o54.006N	109o05.263W
AZ	24-Jun-03	<i>Dipodomys spectabilis</i>	F	A	NR	EP	31o54.006N	109o05.263W
AZ	24-Jun-03	<i>Dipodomys spectabilis</i>	F	A	NR	PB	31o54.006N	109o05.263W
AZ	24-Jun-03	<i>Dipodomys spectabilis</i>	F	SA	NR	PB	31o54.006N	109o05.263W
AZ	24-Jun-03	<i>Neotoma albigula</i>	M	A	NR	EP	31o54.006N	109o05.263W
AZ	24-Jun-03	<i>Neotoma albigula</i>	F	SA	NR	PB	31o54.006N	109o05.263W
AZ	24-Jun-03	<i>Neotoma albigula</i>	F	A	PL	PB	31o54.006N	109o05.263W
AZ	24-Jun-03	<i>Neotoma albigula</i>	F	A	PL	EP	31o54.006N	109o05.263W
AZ	24-Jun-03	<i>Onychomys torridus</i>	F	A	NR	PB	31o53.823N	109o05.265W
AZ	24-Jun-03	<i>Onychomys torridus</i>	F	A	NR	EP	31o54.006N	109o05.263W
AZ	24-Jun-03	<i>Onychomys torridus</i>	F	A	P	EP	31o53.823N	109o05.265W
AZ	24-Jun-03	<i>Onychomys torridus</i>	F	A	P	EP	31o53.823N	109o05.265W
AZ	24-Jun-03	<i>Onychomys torridus</i>	M	A	S	EP	31o53.823N	109o05.265W
AZ	24-Jun-03	<i>Onychomys torridus</i>	M	A	S	EP	31o54.006N	109o05.263W
AZ	24-Jun-03	<i>Peromyscus eremicus</i>	F	A	L	PB	31o53.823N	109o05.265W
AZ	24-Jun-03	<i>Peromyscus eremicus</i>	F	A	NR	EP	31o54.006N	109o05.263W
AZ	24-Jun-03	<i>Peromyscus eremicus</i>	M	SA	NR	PB	31o53.823N	109o05.265W
AZ	24-Jun-03	<i>Peromyscus eremicus</i>	M	A	S	EP	31o53.823N	109o05.265W
AZ	25-Jun-03	<i>Chaetodipus baileyi</i>	.	A	.	PB	31o56.707N	109o05.252W
AZ	25-Jun-03	<i>Chaetodipus baileyi</i>	F	A	NR	EP	31o56.707N	109o05.252W
AZ	25-Jun-03	<i>Chaetodipus baileyi</i>	F	A	NR	EP	31o56.707N	109o05.252W

AZ	25-Jun-03	<i>Dipodomys merriami</i>	M	A	S	PB	31o56.707N	109o05.252W
AZ	25-Jun-03	<i>Dipodomys merriami</i>	M	A	S	PB	31o56.707N	109o05.252W
AZ	25-Jun-03	<i>Dipodomys merriami</i>	M	A	S	PB	31o56.707N	109o05.252W
AZ	25-Jun-03	<i>Dipodomys spectabilis</i>	F	SA	NR	EP	31o56.707N	109o05.252W
AZ	25-Jun-03	<i>Dipodomys spectabilis</i>	M	SA	S	PB	31o56.707N	109o05.252W
AZ	25-Jun-03	<i>Onychomys torridus</i>	F	A	L	PB	31o56.707N	109o05.252W
AZ	25-Jun-03	<i>Onychomys torridus</i>	F	A	NR	EP	31o56.707N	109o05.252W
AZ	25-Jun-03	<i>Onychomys torridus</i>	F	A	NR	EP	31o56.707N	109o05.252W
AZ	25-Jun-03	<i>Onychomys torridus</i>	F	A	NR	EP	31o56.707N	109o05.252W
AZ	25-Jun-03	<i>Onychomys torridus</i>	F	A	NR	PB	31o56.707N	109o05.252W
AZ	25-Jun-03	<i>Onychomys torridus</i>	M	SA	NR	PB	31o56.707N	109o05.252W
AZ	25-Jun-03	<i>Onychomys torridus</i>	F	A	P	EP	31o56.707N	109o05.252W
AZ	25-Jun-03	<i>Onychomys torridus</i>	F	A	P	EP	31o56.707N	109o05.252W
AZ	25-Jun-03	<i>Onychomys torridus</i>	F	A	P	EP	31o56.707N	109o05.252W
AZ	25-Jun-03	<i>Onychomys torridus</i>	F	A	P	PB	31o56.707N	109o05.252W
AZ	25-Jun-03	<i>Onychomys torridus</i>	F	A	P	PB	31o56.707N	109o05.252W
AZ	25-Jun-03	<i>Onychomys torridus</i>	F	A	P	PB	31o56.707N	109o05.252W
AZ	25-Jun-03	<i>Onychomys torridus</i>	F	A	P	PB	31o56.707N	109o05.252W
AZ	25-Jun-03	<i>Onychomys torridus</i>	F	A	P	PB	31o56.707N	109o05.252W
AZ	25-Jun-03	<i>Onychomys torridus</i>	M	A	S	EP	31o56.707N	109o05.252W
AZ	25-Jun-03	<i>Onychomys torridus</i>	M	A	S	EP	31o56.707N	109o05.252W
AZ	25-Jun-03	<i>Onychomys torridus</i>	M	A	S	PB	31o56.707N	109o05.252W
AZ	25-Jun-03	<i>Onychomys torridus</i>	M	A	S	PB	31o56.707N	109o05.252W
AZ	25-Jun-03	<i>Peromyscus eremicus</i>	F	A	NR	EP	31o56.707N	109o05.252W
AZ	25-Jun-03	<i>Peromyscus eremicus</i>	F	A	NR	PB	31o56.707N	109o05.252W
AZ	25-Jun-03	<i>Peromyscus eremicus</i>	M	SA	NR	EP	31o56.707N	109o05.252W
AZ	25-Jun-03	<i>Peromyscus eremicus</i>	F	SA	NR	PB	31o56.707N	109o05.252W
AZ	25-Jun-03	<i>Peromyscus eremicus</i>	F	SA	NR	PB	31o56.707N	109o05.252W
AZ	25-Jun-03	<i>Peromyscus eremicus</i>	F	A	P	EP	31o56.707N	109o05.252W
AZ	25-Jun-03	<i>Peromyscus eremicus</i>	F	A	P	EP	31o56.707N	109o05.252W
AZ	25-Jun-03	<i>Peromyscus eremicus</i>	M	A	S	EP	31o56.707N	109o05.252W
AZ	25-Jun-03	<i>Peromyscus eremicus</i>	M	A	S	PB	31o56.707N	109o05.252W
AZ	25-Jun-03	<i>Peromyscus eremicus</i>	M	A	S	PB	31o56.707N	109o05.252W
CCNHP	30-Jun-03	<i>Onychomys leucogaster</i>	F	SA	NR	PB	E0236246	N3989956
CCNHP	30-Jun-03	<i>Onychomys leucogaster</i>	F	SA	NR	PB	E0236246	N3989956
CCNHP	30-Jun-03	<i>Onychomys leucogaster</i>	F	A	PL	PB	E0236246	N3989956
CCNHP	30-Jun-03	<i>Peromyscus maniculatus</i>	F	A	L	EP	E0236389	N3990635
CCNHP	1-Jul-03	<i>Neotoma albigula</i>	.	.	.	EP	E0241226	N3992559
CCNHP	1-Jul-03	<i>Neotoma albigula</i>	F	A	PL	PB	E0241226	N3992559
CCNHP	1-Jul-03	<i>Onychomys leucogaster</i>	M	A	S	EP	E0241226	N3992559
CCNHP	1-Jul-03	<i>Onychomys leucogaster</i>	F	A	L	EP	E0241226	N3992559
CCNHP	1-Jul-03	<i>Onychomys leucogaster</i>	M	A	NR	PB	E0241226	N3992559
CCNHP	1-Jul-03	<i>Reithrodontomys megalotis</i>	M	A	S	EP	E0241226	N3992559
CCNHP	2-Jul-03	<i>Dipodomys spectabilis</i>	F	A	PL	EP	E0232389	N3992890
CCNHP	2-Jul-03	<i>Onychomys leucogaster</i>	M	A	NR	EP	E0232264	N3992885
CCNHP	2-Jul-03	<i>Onychomys leucogaster</i>	M	A	NR	PB	E0232264	N3992885
CCNHP	2-Jul-03	<i>Onychomys leucogaster</i>	F	A	PL	PB	E0232389	N3992890

CCNHP	2-Jul-03	<i>Onychomys leucogaster</i>	M	A	S	PB	E0232264	N3992885
CCNHP	2-Jul-03	<i>Onychomys leucogaster</i>	M	A	S	EP	E0232389	N3992890
CCNHP	2-Jul-03	<i>Onychomys leucogaster</i>	M	A	S	PB	E0232389	N3992890
CCNHP	2-Jul-03	<i>Perognathus flavus</i>	F	A	L	PB	E0232389	N3992890
CCNHP	2-Jul-03	<i>Perognathus flavus</i>	F	A	NR	PB	E0232264	N3992885
CCNHP	2-Jul-03	<i>Perognathus flavus</i>	F	A	PL	PB	E0232389	N3992890
CCNHP	2-Jul-03	<i>Peromyscus maniculatus</i>	F	A	L	EP	E0232264	N3992885
CCNHP	2-Jul-03	<i>Peromyscus maniculatus</i>	M	SA	NR	PB	E0232264	N3992885
CCNHP	2-Jul-03	<i>Peromyscus maniculatus</i>	F	A	PL	EP	E0232264	N3992885
CCNHP	2-Jul-03	<i>Peromyscus maniculatus</i>	F	A	P	PB	E0232389	N3992890
CCNHP	2-Jul-03	<i>Peromyscus maniculatus</i>	M	A	S	EP	E0232264	N3992885
CCNHP	2-Jul-03	<i>Peromyscus maniculatus</i>	M	A	S	PB	E0232264	N3992885
CCNHP	2-Jul-03	<i>Reithrodontomys megalotis</i>	M	A	NR	EP	E0232389	N3992890
CCNHP	6-Jul-03	<i>Onychomys leucogaster</i>	M	A	NR	PB	E0240531	N3990659
CCNHP	6-Jul-03	<i>Onychomys leucogaster</i>	M	A	NR	PB	E0240531	N3990659
CCNHP	6-Jul-03	<i>Onychomys leucogaster</i>	M	A	S	PB	E0240531	N3990659
CCNHP	6-Jul-03	<i>Peromyscus maniculatus</i>	F	A	L	PB	E0240531	N3990659
CCNHP	6-Jul-03	<i>Peromyscus maniculatus</i>	F	A	NR	EP	E0240531	N3990659
CCNHP	6-Jul-03	<i>Peromyscus maniculatus</i>	F	A	NR	PB	E0240531	N3990659
CCNHP	6-Jul-03	<i>Peromyscus maniculatus</i>	M	A	NR	EP	E0240531	N3990659
CCNHP	6-Jul-03	<i>Peromyscus maniculatus</i>	F	A	P	EP	E0240531	N3990659
CCNHP	6-Jul-03	<i>Peromyscus maniculatus</i>	F	A	P	EP	E0240531	N3990659
CCNHP	6-Jul-03	<i>Peromyscus maniculatus</i>	M	A	S	EP	E0240531	N3990659
CCNHP	6-Jul-03	<i>Peromyscus maniculatus</i>	M	A	S	PB	E0240531	N3990659
CCNHP	6-Jul-03	<i>Peromyscus truei</i>	F	A	PL	PB	E0240531	N3990659
CCNHP	7-Jul-03	<i>Onychomys leucogaster</i>	F	SA	NR	EP	E0237727	N3995303
CCNHP	7-Jul-03	<i>Onychomys leucogaster</i>	M	A	S	EP	E0237727	N3995303
CCNHP	7-Jul-03	<i>Onychomys leucogaster</i>	M	A	S	EP	E0237727	N3995303
CCNHP	7-Jul-03	<i>Onychomys leucogaster</i>	M	A	S	EP	E0237727	N3995303
CCNHP	7-Jul-03	<i>Onychomys leucogaster</i>	F	A	L	EP	E0237727	N3995303
CCNHP	7-Jul-03	<i>Onychomys leucogaster</i>	M	A	S	PB	E0237727	N3995303
CCNHP	7-Jul-03	<i>Onychomys leucogaster</i>	M	A	S	PB	E0237727	N3995303
RP	12-Jul-03	<i>Microtus longicaudus</i>	F	A	NR	EP	36o08.124N	105o28.901W
RP	12-Jul-03	<i>Microtus longicaudus</i>	F	A	NR	EP	36o08.124N	105o28.901W
RP	12-Jul-03	<i>Microtus longicaudus</i>	F	A	NR	EP	36o08.124N	105o28.901W
RP	12-Jul-03	<i>Microtus longicaudus</i>	M	A	NR	EP	36o08.124N	105o28.901W
RP	12-Jul-03	<i>Microtus longicaudus</i>	M	A	NR	EP	36o08.124N	105o28.901W
RP	12-Jul-03	<i>Microtus longicaudus</i>	M	A	NR	PB	36o08.124N	105o28.901W
RP	12-Jul-03	<i>Microtus longicaudus</i>	F	SA	NR	EP	36o08.124N	105o28.901W
RP	12-Jul-03	<i>Microtus longicaudus</i>	M	SA	NR	EP	36o08.124N	105o28.901W
RP	12-Jul-03	<i>Microtus longicaudus</i>	F	A	PL	PB	36o08.124N	105o28.901W
RP	12-Jul-03	<i>Microtus longicaudus</i>	M	A	S	EP	36o08.124N	105o28.901W
RP	12-Jul-03	<i>Peromyscus maniculatus</i>	M	SA	NR	EP	36o08.124N	105o28.901W
RP	12-Jul-03	<i>Peromyscus maniculatus</i>	F	A	PL	EP	36o08.124N	105o28.901W
RP	12-Jul-03	<i>Sorex palustris</i>	.	A	.	EP	36o08.124N	105o28.901W
RP	12-Jul-03	<i>Sorex sp.</i>	.	.	.	PB	36o08.124N	105o28.901W

RP	12-Jul-03	<i>Sorex sp.</i>	.	A	.	PB	36o08.124N	105o28.901W
RP	12-Jul-03	<i>Tamias minimus</i>	F	A	NR	PB	36o08.124N	105o28.901W
RP	12-Jul-03	<i>Zapus princeps</i>	F	A	NR	EP	36o08.124N	105o28.901W
RP	12-Jul-03	<i>Zapus princeps</i>	F	A	NR	EP	36o08.124N	105o28.901W
RP	12-Jul-03	<i>Zapus princeps</i>	F	A	NR	PB	36o08.124N	105o28.901W
RP	12-Jul-03	<i>Zapus princeps</i>	M	A	NR	EP	36o08.124N	105o28.901W
RP	13-Jul-03	<i>Microtus longicaudus</i>	F	A	L	EP	36o10.071N	105o27.210W
RP	13-Jul-03	<i>Microtus longicaudus</i>	F	A	NR	EP	36o10.071N	105o27.210W
RP	13-Jul-03	<i>Microtus longicaudus</i>	F	A	NR	EP	36o10.071N	105o27.210W
RP	13-Jul-03	<i>Microtus longicaudus</i>	F	A	NR	PB	36o10.071N	105o27.210W
RP	13-Jul-03	<i>Microtus longicaudus</i>	M	A	NR	EP	36o10.071N	105o27.210W
RP	13-Jul-03	<i>Microtus longicaudus</i>	M	A	NR	PB	36o10.071N	105o27.210W
RP	13-Jul-03	<i>Microtus longicaudus</i>	M	A	NR	PB	36o10.071N	105o27.210W
RP	13-Jul-03	<i>Microtus longicaudus</i>	F	SA	NR	EP	36o10.071N	105o27.210W
RP	13-Jul-03	<i>Microtus longicaudus</i>	F	SA	NR	PB	36o10.071N	105o27.210W
RP	13-Jul-03	<i>Microtus longicaudus</i>	F	SA	NR	PB	36o10.071N	105o27.210W
RP	13-Jul-03	<i>Microtus longicaudus</i>	M	SA	NR	PB	36o10.071N	105o27.210W
RP	13-Jul-03	<i>Microtus longicaudus</i>	F	A	PL	PB	36o10.071N	105o27.210W
RP	13-Jul-03	<i>Microtus longicaudus</i>	F	A	P	PB	36o10.071N	105o27.210W
RP	13-Jul-03	<i>Microtus longicaudus</i>	F	A	P	PB	36o10.071N	105o27.210W
RP	13-Jul-03	<i>Microtus longicaudus</i>	M	A	S	EP	36o10.071N	105o27.210W
RP	13-Jul-03	<i>Microtus longicaudus</i>	M	A	S	PB	36o10.071N	105o27.210W
RP	13-Jul-03	<i>Mustela erminea</i>	.	.	.	EP	36o10.071N	105o27.210W
RP	13-Jul-03	<i>Peromyscus maniculatus</i>	F	A	P	EP	36o10.071N	105o27.210W
RP	13-Jul-03	<i>Peromyscus maniculatus</i>	M	A	S	EP	36o10.071N	105o27.210W
RP	13-Jul-03	<i>Sorex sp.</i>	.	A	.	EP	36o10.071N	105o27.210W
RP	13-Jul-03	<i>Tamias minimus</i>	M	A	NR	EP	36o10.071N	105o27.210W
RP	13-Jul-03	<i>Zapus princeps</i>	F	A	L	EP	36o10.071N	105o27.210W
RP	13-Jul-03	<i>Zapus princeps</i>	M	A	NR	EP	36o10.071N	105o27.210W
RP	13-Jul-03	<i>Zapus princeps</i>	M	A	NR	EP	36o10.071N	105o27.210W
RP	13-Jul-03	<i>Zapus princeps</i>	M	A	NR	PB	36o10.071N	105o27.210W
RP	13-Jul-03	<i>Zapus princeps</i>	M	A	NR	PB	36o10.071N	105o27.210W
RP	13-Jul-03	<i>Zapus princeps</i>	F	A	P	PB	36o10.071N	105o27.210W
RP	14-Jul-03	<i>Microtus longicaudus</i>	F	A	L	EP	36o09.998N	105o27.260W
RP	14-Jul-03	<i>Microtus longicaudus</i>	F	A	L	PB	36o09.998N	105o27.260W
RP	14-Jul-03	<i>Microtus longicaudus</i>	F	A	NR	EP	36o09.998N	105o27.260W
RP	14-Jul-03	<i>Microtus longicaudus</i>	F	A	NR	EP	36o09.998N	105o27.260W
RP	14-Jul-03	<i>Microtus longicaudus</i>	F	A	NR	EP	36o09.998N	105o27.260W
RP	14-Jul-03	<i>Microtus longicaudus</i>	F	A	NR	PB	36o09.998N	105o27.260W
RP	14-Jul-03	<i>Microtus longicaudus</i>	M	A	NR	EP	36o09.998N	105o27.260W
RP	14-Jul-03	<i>Microtus longicaudus</i>	M	A	NR	PB	36o09.998N	105o27.260W
RP	14-Jul-03	<i>Microtus longicaudus</i>	M	A	NR	PB	36o09.998N	105o27.260W
RP	14-Jul-03	<i>Microtus longicaudus</i>	M	SA	NR	PB	36o09.998N	105o27.260W
RP	14-Jul-03	<i>Microtus longicaudus</i>	M	SA	NR	PB	36o09.998N	105o27.260W
RP	14-Jul-03	<i>Microtus longicaudus</i>	M	SA	NR	PB	36o09.998N	105o27.260W
RP	14-Jul-03	<i>Microtus longicaudus</i>	F	SA	NR	PB	36o09.998N	105o27.260W
RP	14-Jul-03	<i>Microtus longicaudus</i>	F	SA	NR	PB	36o09.998N	105o27.260W

RP	14-Jul-03	<i>Microtus longicaudus</i>	M	SA	NR	EP	36o09.998N	105o27.260W
RP	14-Jul-03	<i>Microtus longicaudus</i>	M	SA	NR	EP	36o09.998N	105o27.260W
RP	14-Jul-03	<i>Microtus longicaudus</i>	M	SA	NR	PB	36o09.998N	105o27.260W
RP	14-Jul-03	<i>Microtus longicaudus</i>	M	SA	NR	PB	36o09.998N	105o27.260W
RP	14-Jul-03	<i>Microtus longicaudus</i>	M	A	S	PB	36o09.998N	105o27.260W
RP	14-Jul-03	<i>Sorex palustris</i>	.	A	.	EP	36o09.998N	105o27.260W
RP	14-Jul-03	<i>Sorex palustris</i>	.	A	.	PB	36o09.998N	105o27.260W
RP	14-Jul-03	<i>Tamias minimus</i>	M	A	NR	EP	36o09.998N	105o27.260W
RP	14-Jul-03	<i>Zapus princeps</i>	M	A	NR	EP	36o09.998N	105o27.260W
RP	14-Jul-03	<i>Zapus princeps</i>	M	A	NR	EP	36o09.998N	105o27.260W
RP	14-Jul-03	<i>Zapus princeps</i>	F	A	P	PB	36o09.998N	105o27.260W
EMPNM	17-Jul-03	<i>Onychomys leucogaster</i>	M	A	NR	PB	E0233868	N3856173
EMPNM	17-Jul-03	<i>Perognathus flavescens</i>	F	A	PL	PB	E0233868	N3856173
EMPNM	17-Jul-03	<i>Perognathus flavus</i>	M	A	S	EP	E0233868	N3856173
EMPNM	17-Jul-03	<i>Perognathus flavus</i>	F	A	PL	EP	E0233868	N3856173
EMPNM	17-Jul-03	<i>Reithrodontomys megalotis</i>	F	A	NR	EP	E0233868	N3856173
EMPNM	18-Jul-03	<i>Peromyscus maniculatus</i>	M	A	S	EP	E0233567	N3858816
EMPNM	18-Jul-03	<i>Peromyscus maniculatus</i>	M	A	S	PB	E0233567	N3858816
EMPNM	18-Jul-03	<i>Peromyscus maniculatus</i>	M	A	S	PB	E0233567	N3858816
EMPNM	18-Jul-03	<i>Peromyscus nasutus</i>	F	SA	NR	PB	E0233567	N3858816
EMPNM	18-Jul-03	<i>Peromyscus nasutus</i>	F	SA	NR	PB	E0233567	N3858816
EMPNM	18-Jul-03	<i>Peromyscus nasutus</i>	F	SA	NR	PB	E0233567	N3858816
EMPNM	18-Jul-03	<i>Peromyscus nasutus</i>	F	A	L	PB	E0233567	N3858816
EMPNM	18-Jul-03	<i>Peromyscus nasutus</i>	M	A	S	PB	E0233567	N3858816
EMPNM	18-Jul-03	<i>Peromyscus nasutus</i>	M	A	S	PB	E0233567	N3858816
EMPNM	18-Jul-03	<i>Peromyscus nasutus</i>	M	A	S	PB	E0233567	N3858816
EMPNM	19-Jul-03	<i>Dipodomys ordii</i>	F	A	L	EP	E0243970	N3874694
EMPNM	19-Jul-03	<i>Dipodomys ordii</i>	M	A	NR	PB	E0243970	N3874694
EMPNM	19-Jul-03	<i>Dipodomys ordii</i>	M	A	S	EP	E0243970	N3874694
EMPNM	19-Jul-03	<i>Dipodomys ordii</i>	M	A	S	PB	E0243970	N3874694
EMPNM	19-Jul-03	<i>Neotoma albigula</i>	M	A	NR	EP	E0243288	N3875804
EMPNM	19-Jul-03	<i>Neotoma albigula</i>	M	A	S	EP	E0243288	N3875804
EMPNM	19-Jul-03	<i>Neotoma mexicana</i>	M	A	NR	EP	E0243288	N3875804
EMPNM	19-Jul-03	<i>Neotoma mexicana</i>	F	SA	NR	EP	E0243288	N3875804
EMPNM	19-Jul-03	<i>Onychomys leucogaster</i>	F	A	NR	EP	E0243970	N3874694
EMPNM	19-Jul-03	<i>Onychomys leucogaster</i>	M	A	S	EP	E0243970	N3874694
EMPNM	19-Jul-03	<i>Onychomys leucogaster</i>	M	A	S	PB	E0243970	N3874694
EMPNM	19-Jul-03	<i>Perognathus flavus</i>	F	A	NR	PB	E0243970	N3874694
EMPNM	19-Jul-03	<i>Perognathus flavus</i>	F	SA	NR	EP	E0243970	N3874694
EMPNM	19-Jul-03	<i>Perognathus flavus</i>	M	SA	NR	EP	E0243970	N3874694
EMPNM	19-Jul-03	<i>Perognathus flavus</i>	F	A	PL	PB	E0243288	N3875804
EMPNM	19-Jul-03	<i>Peromyscus boylii</i>	M	A	S	EP	E0243288	N3875804
EMPNM	19-Jul-03	<i>Peromyscus maniculatus</i>	F	A	NR	EP	E0243288	N3875804
EMPNM	19-Jul-03	<i>Peromyscus maniculatus</i>	M	A	NR	PB	E0243970	N3874694
EMPNM	19-Jul-03	<i>Peromyscus maniculatus</i>	F	SA	NR	EP	E0243970	N3874694
EMPNM	19-Jul-03	<i>Peromyscus maniculatus</i>	M	SA	NR	EP	E0243288	N3875804

EMPNM	19-Jul-03	<i>Peromyscus maniculatus</i>	M	A	S	EP	E0243288	N3875804
EMPNM	19-Jul-03	<i>Peromyscus maniculatus</i>	M	A	S	EP	E0243288	N3875804
EMPNM	19-Jul-03	<i>Peromyscus nasutus</i>	F	A	NR	PB	E0243288	N3875804
EMPNM	19-Jul-03	<i>Peromyscus nasutus</i>	M	A	NR	PB	E0243288	N3875804
EMPNM	19-Jul-03	<i>Peromyscus nasutus</i>	M	SA	NR	EP	E0243288	N3875804
EMPNM	19-Jul-03	<i>Peromyscus nasutus</i>	F	SA	NR	PB	E0243288	N3875804
EMPNM	19-Jul-03	<i>Peromyscus nasutus</i>	F	A	P	EP	E0243288	N3875804
EMPNM	19-Jul-03	<i>Peromyscus nasutus</i>	F	A	P	EP	E0243288	N3875804
EMPNM	19-Jul-03	<i>Peromyscus nasutus</i>	M	A	S	PB	E0243288	N3875804
EMPNM	21-Jul-03	<i>Dipodomys ordii</i>	M	A	NR	PB	E0242011	N3889900
EMPNM	21-Jul-03	<i>Neotoma albigula</i>	.	A	.	PB	E0242011	N3889900
EMPNM	21-Jul-03	<i>Neotoma albigula</i>	F	SA	NR	EP	E0242011	N3889900
EMPNM	21-Jul-03	<i>Neotoma albigula</i>	M	SA	NR	PB	E0242011	N3889900
EMPNM	21-Jul-03	<i>Neotoma albigula</i>	F	A	PL	PB	E0242399	N3889989
EMPNM	21-Jul-03	<i>Perognathus flavus</i>	F	A	NR	PB	E0242011	N3889900
EMPNM	21-Jul-03	<i>Peromyscus maniculatus</i>	M	SA	NR	PB	E0242399	N3889989
EMPNM	21-Jul-03	<i>Peromyscus maniculatus</i>	M	SA	NR	PB	E0242399	N3889989
EMPNM	21-Jul-03	<i>Reithrodontomys megalotis</i>	F	A	P	PB	E0242399	N3889989
EMPNM	21-Jul-03	<i>Reithrodontomys megalotis</i>	M	A	S	EP	E0242399	N3889989
EMPNM	21-Jul-03	<i>Sigmodon fulviventor</i>	.	.	.	EP	E0242399	N3889989
EMPNM	21-Jul-03	<i>Sigmodon fulviventor</i>	.	.	.	EP	E0242399	N3889989
EMPNM	21-Jul-03	<i>Sigmodon fulviventor</i>	M	SA	NR	PB	E0242399	N3889989
EMPNM	21-Jul-03	<i>Sigmodon fulviventor</i>	F	A	PL	PB	E0242399	N3889989
EMPNM	22-Jul-03	<i>Neotoma mexicana</i>	F	A	PL	EP	E0228445	N3847924
EMPNM	22-Jul-03	<i>Neotoma mexicana</i>	M	A	S	EP	E0228445	N3847924
EMPNM	22-Jul-03	<i>Peromyscus maniculatus</i>	M	A	S	PB	E0228445	N3847924
EMPNM	22-Jul-03	<i>Peromyscus truii</i>	F	SA	NR	PB	E0228445	N3847924
EMPNM	22-Jul-03	<i>Peromyscus truii</i>	F	A	P	PB	E0228445	N3847924
EMPNM	22-Jul-03	<i>Peromyscus truii</i>	F	A	P	PB	E0228690	N3849016
EMPNM	22-Jul-03	<i>Peromyscus truii</i>	F	A	L	PB	E0228690	N3849016
EMPNM	22-Jul-03	<i>Peromyscus truii</i>	M	A	S	PB	E0228445	N3847924
EMPNM	22-Jul-03	<i>Peromyscus truii</i>	M	A	S	PB	E0228445	N3847924
EMPNM	22-Jul-03	<i>Tamias dorsalis</i>	M	A	S	EP	E0228690	N3849016
EMPNM	23-Jul-03	<i>Neotoma mexicana</i>	F	SA	NR	EP	E0240892	N3870545
EMPNM	23-Jul-03	<i>Neotoma mexicana</i>	M	SA	NR	EP	E0240892	N3870545
EMPNM	23-Jul-03	<i>Neotoma mexicana</i>	F	A	PL	EP	E0240892	N3870545
EMPNM	23-Jul-03	<i>Neotoma mexicana</i>	F	A	PL	PB	E0240892	N3870545
EMPNM	23-Jul-03	<i>Neotoma mexicana</i>	M	A	S	PB	E0240892	N3870545
EMPNM	23-Jul-03	<i>Peromyscus maniculatus</i>	F	A	NR	EP	E0240892	N3870545
EMPNM	23-Jul-03	<i>Peromyscus maniculatus</i>	F	A	NR	PB	E0240892	N3870545
EMPNM	23-Jul-03	<i>Peromyscus maniculatus</i>	M	A	NR	PB	E0240892	N3870545
EMPNM	23-Jul-03	<i>Peromyscus maniculatus</i>	M	SA	NR	PB	E0240892	N3870545
EMPNM	23-Jul-03	<i>Peromyscus maniculatus</i>	M	A	S	EP	E0240892	N3870545
EMPNM	23-Jul-03	<i>Peromyscus maniculatus</i>	M	A	S	PB	E0240892	N3870545
EMPNM	23-Jul-03	<i>Peromyscus maniculatus</i>	M	A	S	PB	E0241610	N3870937

EMPNM	23-Jul-03	<i>Peromyscus maniculatus</i>	M	A	S	PB	E0241610	N3870937
EMPNM	23-Jul-03	<i>Peromyscus nasutus</i>	F	SA	L	PB	E0240892	N3870545
EMPNM	23-Jul-03	<i>Peromyscus nasutus</i>	F	A	NR	PB	E0240892	N3870545
EMPNM	23-Jul-03	<i>Peromyscus nasutus</i>	F	SA	NR	PB	E0240892	N3870545
EMPNM	23-Jul-03	<i>Peromyscus nasutus</i>	F	A	P	PB	E0240892	N3870545
EMPNM	23-Jul-03	<i>Peromyscus nasutus</i>	M	A	S	PB	E0240892	N3870545
EMPNM	23-Jul-03	<i>Peromyscus nasutus</i>	M	A	S	PB	E0240892	N3870545
EMPNM	23-Jul-03	<i>Peromyscus truei</i>	F	SA	NR	PB	E0241610	N3870937
EMPNM	23-Jul-03	<i>Peromyscus truei</i>	M	A	S	PB	E0241610	N3870937
EMPNM	24-Jul-03	<i>Peromyscus maniculatus</i>	F	SA	NR	PB	E0242661	N3889753
EMPNM	24-Jul-03	<i>Sigmodon fulviventor</i>	F	A	NR	PB	E0242661	N3889753
EMPNM	24-Jul-03	<i>Sigmodon fulviventor</i>	F	SA	NR	PB	E0242661	N3889753
EMPNM	24-Jul-03	<i>Sigmodon fulviventor</i>	M	A	NR	EP	E0242661	N3889753
EMPNM	24-Jul-03	<i>Neotoma albigula</i>	F	A	PL	EP	E0242661	N3889753
EMPNM	24-Jul-03	<i>Reithrodontomys megalotis</i>	F	A	P	PB	E0242661	N3889753
EMPNM	24-Jul-03	<i>Sigmodon fulviventor</i>	F	A	P	PB	E0242661	N3889753
EMPNM	24-Jul-03	<i>Sigmodon fulviventor</i>	F	A	P	PB	E0242661	N3889753
EMPNM	24-Jul-03	<i>Peromyscus maniculatus</i>	M	A	S	EP	E0242661	N3889753
EMPNM	24-Jul-03	<i>Peromyscus maniculatus</i>	M	A	S	EP	E0242661	N3889753
EMPNM	24-Jul-03	<i>Reithrodontomys megalotis</i>	M	A	S	PB	E0242661	N3889753
EMPNM	24-Jul-03	<i>Reithrodontomys megalotis</i>	M	A	S	PB	E0242661	N3889753
EMPNM	24-Jul-03	<i>Reithrodontomys megalotis</i>	M	A	S	PB	E0242661	N3889753
EMPNM	24-Jul-03	<i>Reithrodontomys megalotis</i>	M	A	S	PB	E0242661	N3889753
EMPNM	24-Jul-03	<i>Sigmodon fulviventor</i>	M	A	S	PB	E0242661	N3889753
EMPNM	24-Jul-03	<i>Sigmodon fulviventor</i>	M	A	S	PB	E0242661	N3889753

Appendix 3. Data collected during winter 2004 for experiment A by location. BNM-Bandelier National Monument (Los Alamos and Sandoval Cos., New Mexico), AZ- near Portal (Cochise Co., Arizona), CCNHP- Chaco Culture National Historical Park (San Juan Co., New Mexico), RP- along Rito la Presa (Taos Co., New Mexico), EMPNM- El Mal Pais National Monument (Cibola Co., New Mexico). Reproductive condition (NR- no visual signs of reproduction, P-pregnant, L-Lactating, S- descended testes, PL- post lactating). SA indicates sub-adults and A indicates adults. Bait type indicates which trap the individual was captured in at the trap station (EP- empty pack, PB- peanut butter bait pack). The symbol (-) indicates that the given information could not be collected.

Location	Date	Species	Sex	Age	Repro	Bait	Latitude	Longitude
AZ	11-Jan-04	<i>Dipodomys merriami</i>	F	A	NR	NP	31o56.095N	109o05.247W
AZ	11-Jan-04	<i>Dipodomys merriami</i>	F	A	NR	NP	31o56.095N	109o05.247W
AZ	11-Jan-04	<i>Dipodomys merriami</i>	F	A	NR	NP	31o56.095N	109o05.247W
AZ	11-Jan-04	<i>Dipodomys merriami</i>	F	A	NR	NP	31o56.358N	109o04.999W
AZ	11-Jan-04	<i>Dipodomys merriami</i>	F	A	NR	NP	31o56.358N	109o04.999W
AZ	11-Jan-04	<i>Dipodomys merriami</i>	F	A	NR	NP	31o56.358N	109o04.999W
AZ	11-Jan-04	<i>Dipodomys merriami</i>	F	A	NR	PB	31o56.095N	109o05.247W
AZ	11-Jan-04	<i>Dipodomys merriami</i>	F	A	NR	PB	31o56.095N	109o05.247W
AZ	11-Jan-04	<i>Dipodomys merriami</i>	F	A	NR	PB	31o56.358N	109o04.999W
AZ	11-Jan-04	<i>Dipodomys merriami</i>	F	A	NR	PB	31o56.358N	109o04.999W
AZ	11-Jan-04	<i>Dipodomys merriami</i>	F	A	NR	PB	31o56.358N	109o04.999W
AZ	11-Jan-04	<i>Dipodomys merriami</i>	F	A	NR	PB	31o56.358N	109o04.999W
AZ	11-Jan-04	<i>Dipodomys merriami</i>	M	A	NR	NP	31o56.095N	109o05.247W
AZ	11-Jan-04	<i>Dipodomys merriami</i>	M	A	NR	NP	31o56.095N	109o05.247W
AZ	11-Jan-04	<i>Dipodomys merriami</i>	M	A	NR	NP	31o56.095N	109o05.247W
AZ	11-Jan-04	<i>Dipodomys merriami</i>	M	A	NR	NP	31o56.095N	109o05.247W
AZ	11-Jan-04	<i>Dipodomys merriami</i>	M	A	NR	NP	31o56.095N	109o05.247W
AZ	11-Jan-04	<i>Dipodomys merriami</i>	M	A	NR	NP	31o56.358N	109o04.999W
AZ	11-Jan-04	<i>Dipodomys merriami</i>	M	A	NR	NP	31o56.358N	109o04.999W
AZ	11-Jan-04	<i>Dipodomys merriami</i>	M	A	NR	NP	31o56.358N	109o04.999W
AZ	11-Jan-04	<i>Dipodomys merriami</i>	M	A	NR	NP	31o56.358N	109o04.999W
AZ	11-Jan-04	<i>Dipodomys merriami</i>	M	A	NR	NP	31o56.358N	109o04.999W
AZ	11-Jan-04	<i>Dipodomys merriami</i>	M	A	NR	PB	31o56.095N	109o05.247W
AZ	11-Jan-04	<i>Dipodomys merriami</i>	M	A	NR	PB	31o56.095N	109o05.247W
AZ	11-Jan-04	<i>Dipodomys merriami</i>	M	A	NR	PB	31o56.095N	109o05.247W
AZ	11-Jan-04	<i>Dipodomys merriami</i>	M	A	NR	PB	31o56.095N	109o05.247W
AZ	11-Jan-04	<i>Dipodomys merriami</i>	M	A	NR	PB	31o56.095N	109o05.247W
AZ	11-Jan-04	<i>Dipodomys merriami</i>	M	A	NR	PB	31o56.358N	109o04.999W
AZ	11-Jan-04	<i>Dipodomys merriami</i>	M	A	NR	PB	31o56.358N	109o04.999W
AZ	11-Jan-04	<i>Dipodomys merriami</i>	M	A	NR	PB	31o56.358N	109o04.999W
AZ	11-Jan-04	<i>Dipodomys merriami</i>	M	A	NR	PB	31o56.095N	109o05.247W
AZ	11-Jan-04	<i>Dipodomys merriami</i>	M	A	NR	PB	31o56.095N	109o05.247W
AZ	11-Jan-04	<i>Dipodomys ordii</i>	F	A	NR	NP	31o56.095N	109o05.247W
AZ	11-Jan-04	<i>Onychomys torridus</i>	F	A	NR	NP	31o56.358N	109o04.999W
AZ	11-Jan-04	<i>Onychomys torridus</i>	M	A	NR	NP	31o56.358N	109o04.999W
AZ	12-Jan-04	<i>Dipodomys merriami</i>	F	A	NR	NP	31o56.519N	109o05.250W
AZ	12-Jan-04	<i>Dipodomys merriami</i>	F	A	NR	NP	31o56.519N	109o05.250W
AZ	12-Jan-04	<i>Dipodomys merriami</i>	F	A	NR	NP	31o56.519N	109o05.250W
AZ	12-Jan-04	<i>Dipodomys merriami</i>	F	A	NR	NP	31o56.519N	109o05.250W
AZ	12-Jan-04	<i>Dipodomys merriami</i>	F	A	NR	NP	31o56.519N	109o05.250W
AZ	12-Jan-04	<i>Dipodomys merriami</i>	F	A	NR	NP	31o56.519N	109o05.250W

AL	17-Mar-04	<i>Sigmodon hispidus</i>	M	A	NR	NP	32o26.133N	85o38.767W
AL	17-Mar-04	<i>Sigmodon hispidus</i>	M	SA	NR	NP	32o26.133N	85o38.767W

Appendix 4. Data collected during winter 2004 for experiment B by location. BNM-Bandelier National Monument (Los Alamos and Sandoval Cos., New Mexico), AZ- near Portal (Cochise Co., Arizona), CCNHP- Chaco Culture National Historical Park (San Juan Co., New Mexico), RP- along Rito la Presa (Taos Co., New Mexico), EMPNM- El Mal Pais National Monument (Cibola Co., New Mexico). Reproductive condition (NR- no visual signs of reproduction, P-pregnant, L-Lactating, S- descended testes, PL- post lactating). SA indicates sub-adults and A indicates adults. Bait type indicates which trap the individual was captured in at the trap station (EP- empty pack, PB- peanut butter bait pack). The symbol (-) indicates that the given information could not be collected.

Location	Date	Species	Sex	Age	Repro	Bait	Latitude	Longitude
AZ	11-Jan-04	<i>Ammospermophilus harrisi</i>	F	A	NR	EP	31°56.095N	109°05.247W
AZ	11-Jan-04	<i>Chaetodipus baileyi</i>	F	A	NR	PB	31°56.095N	109°05.247W
AZ	11-Jan-04	<i>Chaetodipus baileyi</i>	F	A	NR	PB	31°56.095N	109°05.247W
AZ	11-Jan-04	<i>Chaetodipus baileyi</i>	M	A	NR	PB	31°56.095N	109°05.247W
AZ	11-Jan-04	<i>Dipodomys merriami</i>	F	A	NR	EP	31°56.095N	109°05.247W
AZ	11-Jan-04	<i>Dipodomys merriami</i>	F	A	NR	EP	31°56.095N	109°05.247W
AZ	11-Jan-04	<i>Dipodomys merriami</i>	F	A	NR	EP	31°56.095N	109°05.247W
AZ	11-Jan-04	<i>Dipodomys merriami</i>	F	A	NR	EP	31°56.095N	109°05.247W
AZ	11-Jan-04	<i>Dipodomys merriami</i>	F	A	NR	EP	31°56.095N	109°05.247W
AZ	11-Jan-04	<i>Dipodomys merriami</i>	F	A	NR	EP	31°56.095N	109°05.247W
AZ	11-Jan-04	<i>Dipodomys merriami</i>	F	A	NR	EP	31°56.095N	109°05.247W
AZ	11-Jan-04	<i>Dipodomys merriami</i>	F	A	NR	EP	31°56.095N	109°05.247W
AZ	11-Jan-04	<i>Dipodomys merriami</i>	F	A	NR	EP	31°56.095N	109°05.247W
AZ	11-Jan-04	<i>Dipodomys merriami</i>	F	A	NR	PB	31°56.095N	109°05.247W
AZ	11-Jan-04	<i>Dipodomys merriami</i>	F	A	NR	PB	31°56.095N	109°05.247W
AZ	11-Jan-04	<i>Dipodomys merriami</i>	F	A	NR	PB	31°56.095N	109°05.247W
AZ	11-Jan-04	<i>Dipodomys merriami</i>	F	A	NR	PB	31°56.095N	109°05.247W
AZ	11-Jan-04	<i>Dipodomys merriami</i>	F	A	NR	PB	31°56.095N	109°05.247W
AZ	11-Jan-04	<i>Dipodomys merriami</i>	F	A	NR	PB	31°56.095N	109°05.247W
AZ	11-Jan-04	<i>Dipodomys merriami</i>	F	A	NR	PB	31°56.095N	109°05.247W
AZ	11-Jan-04	<i>Dipodomys merriami</i>	F	A	NR	PB	31°56.095N	109°05.247W
AZ	11-Jan-04	<i>Dipodomys merriami</i>	F	A	NR	PB	31°56.095N	109°05.247W
AZ	11-Jan-04	<i>Dipodomys merriami</i>	F	A	NR	EP	31°56.358N	109°04.999W
AZ	11-Jan-04	<i>Dipodomys merriami</i>	F	A	NR	EP	31°56.358N	109°04.999W
AZ	11-Jan-04	<i>Dipodomys merriami</i>	F	A	NR	EP	31°56.358N	109°04.999W
AZ	11-Jan-04	<i>Dipodomys merriami</i>	F	A	NR	EP	31°56.358N	109°04.999W
AZ	11-Jan-04	<i>Dipodomys merriami</i>	F	A	NR	EP	31°56.358N	109°04.999W
AZ	11-Jan-04	<i>Dipodomys merriami</i>	F	A	NR	EP	31°56.358N	109°04.999W
AZ	11-Jan-04	<i>Dipodomys merriami</i>	F	A	NR	EP	31°56.358N	109°04.999W
AZ	11-Jan-04	<i>Dipodomys merriami</i>	F	A	NR	EP	31°56.358N	109°04.999W
AZ	11-Jan-04	<i>Dipodomys merriami</i>	F	A	NR	EP	31°56.358N	109°04.999W
AZ	11-Jan-04	<i>Dipodomys merriami</i>	F	A	NR	EP	31°56.358N	109°04.999W
AZ	11-Jan-04	<i>Dipodomys merriami</i>	F	A	NR	EP	31°56.358N	109°04.999W
AZ	11-Jan-04	<i>Dipodomys merriami</i>	F	A	NR	EP	31°56.358N	109°04.999W
AZ	11-Jan-04	<i>Dipodomys merriami</i>	F	A	NR	EP	31°56.358N	109°04.999W
AZ	11-Jan-04	<i>Dipodomys merriami</i>	F	A	NR	PB	31°56.358N	109°04.999W

AZ	14-Jan-04	<i>Dipodomys merriami</i>	M	A	NR	PB	31°56.864N	109°05.253W
AZ	14-Jan-04	<i>Dipodomys merriami</i>	M	A	NR	PB	31°56.864N	109°05.253W
AZ	14-Jan-04	<i>Dipodomys merriami</i>	M	A	NR	PB	31°56.864N	109°05.253W
AZ	14-Jan-04	<i>Dipodomys merriami</i>	M	A	NR	PB	31°56.864N	109°05.253W
AZ	14-Jan-04	<i>Dipodomys merriami</i>	M	A	NR	PB	31°56.864N	109°05.253W
AZ	14-Jan-04	<i>Dipodomys merriami</i>	M	A	NR	PB	31°56.864N	109°05.253W
AZ	14-Jan-04	<i>Dipodomys merriami</i>	M	A	NR	PB	31°56.864N	109°05.253W
AZ	14-Jan-04	<i>Dipodomys ordii</i>	M	A	NR	EP	31°56.864N	109°05.253W
AZ	14-Jan-04	<i>Dipodomys spectabilis</i>	M	A	NR	EP	31°56.864N	109°05.253W
AZ	14-Jan-04	<i>Onychomys torridus</i>	M	A	NR	EP	31°56.864N	109°05.253W
AZ	14-Jan-04	<i>Onychomys torridus</i>	M	A	NR	EP	31°56.864N	109°05.253W
AZ	14-Jan-04	<i>Peromyscus eremicus</i>	F	A	P	EP	31°56.864N	109°05.253W
AL	23-Feb-04	<i>Peromyscus polionotis</i>	F	A	P	EP	32°24.283N	85°52.082W
AL	23-Feb-04	<i>Reithrodontomys humulis</i>	M	A	NR	EP	32°24.283N	85°52.082W
AL	28-Feb-04	<i>Sigmodon hispidus</i>	M	A	NR	EP	32°24.283N	85°52.082W
AL	3-Mar-04	<i>Peromyscus polionotis</i>	M	A	NR	EP	32°24.283N	85°52.082W
AL	3-Mar-04	<i>Reithrodontomys humulis</i>	F	A	P	PB	32°24.283N	85°52.082W
AL	3-Mar-04	<i>Sigmodon hispidus</i>	F	A	NR	EP	32°24.283N	85°52.082W
AL	3-Mar-04	<i>Sigmodon hispidus</i>	F	A	NR	EP	32°24.283N	85°52.082W
AL	3-Mar-04	<i>Sigmodon hispidus</i>	F	A	NR	EP	32°24.283N	85°52.082W
AL	3-Mar-04	<i>Sigmodon hispidus</i>	F	SA	NR	EP	32°24.283N	85°52.082W
AL	3-Mar-04	<i>Sigmodon hispidus</i>	F	SA	NR	EP	32°24.283N	85°52.082W
AL	3-Mar-04	<i>Sigmodon hispidus</i>	M	A	NR	EP	32°24.283N	85°52.082W
AL	3-Mar-04	<i>Sigmodon hispidus</i>	M	A	NR	EP	32°24.283N	85°52.082W
AL	3-Mar-04	<i>Sigmodon hispidus</i>	M	A	NR	EP	32°24.283N	85°52.082W
AL	3-Mar-04	<i>Sigmodon hispidus</i>	M	A	NR	EP	32°24.283N	85°52.082W
AL	3-Mar-04	<i>Sigmodon hispidus</i>	M	A	NR	EP	32°24.283N	85°52.082W
AL	3-Mar-04	<i>Sigmodon hispidus</i>	M	A	NR	EP	32°24.283N	85°52.082W
AL	3-Mar-04	<i>Sigmodon hispidus</i>	M	A	NR	EP	32°24.283N	85°52.082W
AL	3-Mar-04	<i>Sigmodon hispidus</i>	M	A	NR	EP	32°24.283N	85°52.082W
AL	3-Mar-04	<i>Sigmodon hispidus</i>	M	A	NR	PB	32°24.283N	85°52.082W
AL	3-Mar-04	<i>Sigmodon hispidus</i>	M	A	NR	PB	32°24.283N	85°52.082W
AL	10-Mar-04	<i>Peromyscus polionotis</i>	M	A	NR	PB	32°26.133N	85°38.767W