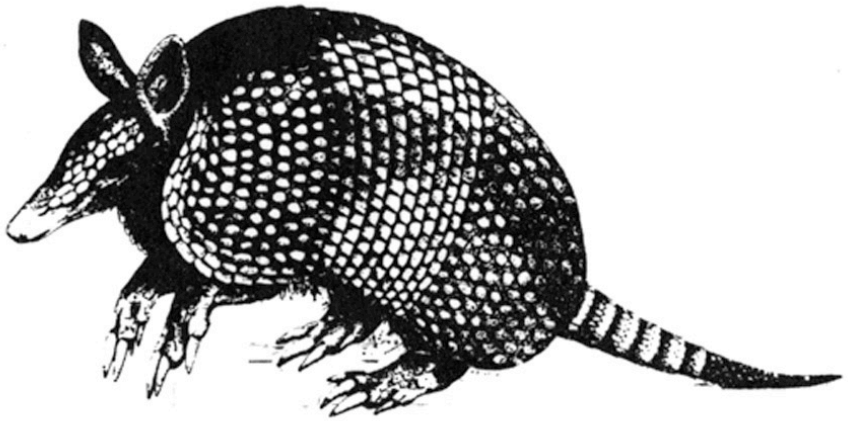
Texas Society of Mammalogists



Newsletter

2006

Celebrating the 24rd annual meeting

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Notes from the Newsletter Editor

Russell Pfau

I would like to thank Beth Watson for compiling member information for this year's newsletter. Members are encouraged to contribute to the content of the newsletter. If you have an announcement of interest to Texas mammalogists, please let me know by email (pfau@tarleton.edu).

Feel free to 'Google' the TSM website as it has been found and indexed by the infamous search engine Google. Information about the society, committees, membership, and meetings can be found at the website along with meeting registration forms and current and past newsletters. I hope the new website is serving the society well. If anyone has comments, suggestions, or corrections don't hesitate to let me know in person or by email (pfau@tarleton.edu).

Patronage of TSM

There are five levels of patron (lifetime) membership: Regular Patron membership is $100, but consider upgrading your patron membership to the Ocelot level ($125), the Bobcat level ($250), the Puma level ($500) or the Jaguar level ($1000). Contributions will be applied to the TSM endowment fund.

Regular Patron members include Jo Actkinson, Loren K. Ammerman, Robert Bradley, Ron Chesser, Arthur G. Cleveland, Robert C. Dowler, Herschel Garner, Ira F. Greenbaum, Clyde Jones, Tom Lee, Robert Martin, Ann Maxwell, Brenda Rodgers, David J. Schmidly, Steve Smith, Phil Sudman, Kenneth T. Wilkins, and Earl Zimmerman.

Ocelot Level members include Mike Tewes, Scott Chirhart, Steve Hoofer, Ron Van Den Bussche, Meredith Hamilton, and Stephen McReynolds.

Bobcat Level members include Carl Phillips.

There are currently no Puma Level members.

Jaguar Level members include Rollin Baker and Robert Baker.

History of TSM Draft Manuscript

Robert Baker and Lisa Bradley will be distributing a draft of the "History of the Texas Society of Mammalogists" manuscript to all members of the Executive Committee for their review and input. We would like to thank everyone for their help so far, particularly with the biographies of the former Presidents, and we would appreciate everyone's continued input and suggestions so this important document will be as thorough and accurate as possible. -Lisa Bradley

Funding Opportunities: Annual Report of the Conservation Committee

The 2004 Conservation Committee report contains a compilation of funding opportunities that support research related to conservation of mammals occurring in Texas. Brief summaries are presented for both governmental and nongovernmental organizations. Included are web URLs that can be consulted for more details on eligibility, submission dates, etc. The report can be accessed from the TSM website.

Texas Society of Mammalogists
Minutes of the 23rd Annual Business Meeting
19 February 2005

The meeting was called to order at 4:00 pm by President Loren K. Ammerman. The minutes of the 2004 Annual Business Meeting as written in the 2005 Meeting Program were approved.

Officers' Reports

Secretary-Treasurer, Ann Maxwell summarized the Treasurer's Report for 2004. Income for calendar year 2004 was $10,307.88 and expenses were $8,088.91, giving a net profit of $2,218.97. The auction in 2004 brought in nearly $2,000 of that amount. The remainder was due mostly to t-shirt sales. We had one new patron member at the 2004 meeting – Loren K. Ammerman. In November, $15,000 of the Society's savings was put into a mutual fund in order to increase interest income. As of 25 December 2004, total assets for the Texas Society of Mammalogists were $23,088.91. The Treasurer's Report was approved by the attending members. President Ammerman announced that Ann was resigning her post as secretary-treasurer.

Permanent Secretary, Tom Lee reported that the materials to be archived were being moved to the Southwest Collection at Texas Tech University under the care of Lisa Bradley. President Ammerman announced that Tom was stepping down as Permanent Secretary as he was to be the Society's president for the coming year.

Newsletter/Webpage Editor, Russell Pfau asked that all members make sure he has their e-mail addresses. He also asked for all information that can be posted on the webpage or in the newsletter (www.tarleton.edu/~biologyweb/tsm). He reported that people are having trouble finding the site using web search engines such as Google. Russell said that it would take time for the page to become linked into enough other websites for the searches to pick it up.

Reports from Committee Chairs

Honorary Members Chair, Phil Sudman reported that Ira Greenbaum and Robert Martin would be honored at the banquet later in the evening. They would be receiving framed

certificates. Phil stated that the Executive Committee had no nominees for 2005, but asked that any nominations for the Class of 2005 from the members be sent to him.

Committee on Conservation Chair, Ken Wilkins said that the committee needs to be "reconstituted" due to the loss of several members. Because of that, the committee had not been very active during 2004. He asked for volunteers to contact him at Ken_Wilkins@baylor.edu.

Committee on Student Honoraria Chair, Tom Lee reported that the results of the competitions would be announced at the banquet. After the banquet dinner, winners were announced as follows: 1) for oral presentations, Rollin H. Baker Award winner was Brandi Coyner (Sam Noble Oklahoma Museum of Natural History); TSM Award winner was Francisca Mendez-Harclerode (Texas Tech University); William B. Davis Award winner was Shauna Marquardt (Fort Hays State University) and Aaron Haines (Texas A&M University-Kingsville) received an honorable mention; and Robert L. Packard Award winner was Peter Larsen (Texas Tech University); and 2) for poster presentations, Clyde Jones Award winner was Adam Brown (Texas Tech University); and Vernon Bailey Award winner was Leesa Patterson (Abilene Christian University). All awards consisted of an award certificate signed by the current TSM President, Loren Ammerman, and a cash prize ($150 for the Packard Award and $100 for all others).

Government Liaison Committee Chair, Robert Dowler, introduced Duane Schlitter, from Texas Parks and Wildlife Department (TPWD). Shlitter reported that TPWD would be holding a series of meetings during which they would be trying to identify species of mammals that should be considered for future research. Duane said that he would be working on the issue of State Wildlife Grants. The TPWD would be having meetings to come up with strategic plans which needed to ready by October 2005 for the US Government. He said that the grants may be available by 2006. Texas's share of $74 million would be around $4 to $4.5 million for these grants. TPWD would form six committees to be looking at different groups (herps, mammals, birds, terrestrial invertebrates, and invertebrates and fish). Species considered would be designated as high, medium, or low priority. Duane said that funds would be available through TPWD for research projects.

Committee on 25th Annual TSM Meeting Chair, Robert Baker reported that Lisa Bradley and Clyde Jones are helping him with the written history of TSM . The first official meeting of the Society was in 1983. The committee needs information (memories) about what happened during the formative years, between 1966 and 1983. He said that the published history should be ready to hand out at the 2007 meeting. T-shirts will be available. He asked for suggestions on speakers for the 25th meeting and for ideas on activities to be included during that meeting.

Auction Committee Chair, Marcy Revelez reported that the committee also consisted of Meredith Hamilton, Robert Bradley and Joel Brant. The committee was very active in rounding up auction items – even donations from online companies. The number of auction items was so numerous that it was decided we would have a silent auction as well

as a live auction following the banquet address (which, by the way, was given by Ron Van Den Bussche instead of Tom Kunz. Dr. Kunz had last minute medical problems). Marcy asked members to contact her if they were interested in helping with the 2006 auction.

Election of Officers

President-Elect. The Executive Committee put forth one nominee – Carleton Phillips. President Ammerman asked for nominations from the floor. There were none. Carleton Phillips was elected by acclamation.

Permanent Secretary. The Executive Committee nominated Lisa Bradley. President Ammerman asked for nominations from the floor. There were none. Lisa Bradley was elected by acclamation.

Secretary-Treasurer. The Executive Committee nominated Loren Ammerman. There were no other nominations and Loren was elected by acclamation.

New Business

TSM Meeting Site for 2006. The motion was made and passed by acclamation to have the 2006 meeting of TSM at the Texas Tech University Center at Junction. The date of the meeting would be 17-19 February 2006.

Endowment Fund. Robert Baker announced that in order to accomplish the goals of TSM, we needed to increase our endowment fund to at least $100,000. Rollin Baker devised a plan to raise money whereby large donations would fall into one of four levels. The Jaguar Level requires a $1,000 donation, the Puma Level requires $500, the Bobcat Level requires $250 and the Ocelot Level requires $125, (The regular Patron Membership continues at $100.) Robert Baker asked that others join the first – Rollin Baker and Robert Baker are Jaguars, Carl Phillips is a Bobcat and Mike Tewes is an Ocelot. Before the meeting was over, others had joined this group.

Other new business. Ann asked that a hat be passed to help pay for the adult beverages provided. Donations from the hat totaled $162.

Last minute announcements were made about the banquet, auction, and entertainment. There were 120 members attending the meeting. Several states besides Texas were represented. Loren asked that everyone encourage more students to attend the meeting and especially to bring them to the business meeting. It is they who are the future of this organization.

Meeting was adjourned at 4:40 p.m.

DOWNS AND UPS OF TEXAS MAMMALS

Comment by Rollin Baker

It's funny how we get notions that persist about the status of our animal life. In my case back in the late 1930s, I was thoroughly convinced, mostly by what my mentors reported, that some of our major species of mammals were down and not about to come back. On a countrywide basis, for example, fisher and marten in New England and gray wolves and grizzlies along our western border with Canada were in deep trouble. Now we've got those back and at least semi-stabilized but lost the remnants of our last caribou herd in Minnesota and have an iffy program trying to save black-footed ferret.

Turning to Texas, we lost bison, wapiti, and grizzly during early settlement and gray wolf and probably black-footed ferret not long after. In the late 1930s, the results of the first statewide inventory of major mammalian life since Vernon Bailey's 1905 report showed drastic species reductions had also occurred. Down and near out were our populations of beaver, otter, pronghorn, bighorn, black bear, black-tailed prairie dog, and even cougar. Despite those discouraging findings, all of these species are to date still in our midst with many even moving back into range that they once occupied in pre-settlement times. Unfortunately, our array of tropical cats has lost far too much of their limited habitat in the lower Río Grande Valley with token populations of jaguar, margay, and jaguarundi edged out and ocelot not thriving. After 1902, the Hardin County prairie vole also disappeared.

As for gray squirrel, swamp rabbit, eastern hog-nosed skunk, long-tailed weasel, eastern spotted skunk, thirteen-lined ground squirrel, muskrat, and possibly others, they have lost range although we don,t know just how much.

Others struggling to survive include those living on barrier beaches and competing with humans for living space. Worrisome also is the uneasy status of small, isolated populations of *robustus* cottontail, gray-footed chipmunk, Mexican vole, and possibly yellow-nosed cotton rat on Trans-Pecos island-like highlands. Likewise, far too little is known about the status of our two species of short-tailed shrew, Texas kangaroo rat, and woodland vole. Worthwhile would be monitoring of our new additions, tawny-belied cotton rat and prairie vole.

We need to keep better track. In the late 1980s, for example, nine-banded armadillos declined impressively in my sector and in others. Local observers were not aware of this until they suddenly realized that there were no dead ones on roads. Then they exclaimed, "come to think of
it, but I haven't seen any 'dillos lately"! Happily by 2003, locals
started seeing them again. In the meantime, no one could come up with a good reason for their brief demise. That was a serious failing!

EVENING THOUGHTS ABOUT TEXAS MAMMALS

Comment by Rollin Baker

Non-human mammals are a compelling lot. Of course if they pollute by our standards and invade our alleged privacies, we want them one whether there are deer browsing on yard-shrubbery, armadillos in under-house-burrows, bats in churches, opossums in garbage cans, squirrels in attics, striped skunks in hen houses, white-footed mice in camp houses, coyotes harassing sheep, moles in gardens, etc. However, when these critters keep out of our way, are not under foot, and are relegated to the places assigned them by intruding and autocratic humans, we are rather fond of them.

Save for large and diurnal kinds, they don,t attract enthusiastic watchers the way those colorful feathered reptiles do. However, a mammalogist who looks out over a piece of choice Texas terrain wants to know more about the activities of its small and inconspicuous resident mammals.

In the old days, Vernon Bailey and such stellar field associates as William Lloyd, Ned Hollister, and B. H. Dutcher did the necessary spade work to inventory most of our Texas mammals: their habitat preferences, their life styles, their associates, their economic importance - and preserved voucher specimens for classification by museum-oriented systematists like C. H. Merriam and W. H. Osgood. Finally, there were the popularizers like Ernest Thompson Seton and Thornton W. Burgess, with youngsters of my generation wishing they could talk animal language like Dr. Dolittle could.

By the late 1930s, the new crop of field mammalogists was less apt to be itinerate and reconnaissance collectors but were slowly turning more to localized life history and ecological studies. And the mammals that received the most long-term and intensive investigations were those that humans liked to hunt, eat, stuff for exhibit in trophy dens, or to control as pests. For the itchy wanderlust types, these endeavors were restrictive so they departed for alien real estate where mammals were less well known.

And suddenly in the post WWII years, our native mammals caught the attention of white-coated lab-types. These non-mammalogists, if that term is acceptable, had no true affection for the creatures themselves but just wanted certain of their vital parts that might in some way forward their studies in such specialties as biochemical evolution, behavior, medicine, genetics, physiology, and nutrition.

But where does all of this leave the so-called old-fashion eumammalogists or mammalophiles, if that's a better term? These days, their main hangouts are in the few-and-far-between research museums. Regretfully, there is now much less demand for the natural history types in universities and colleges. In fact, professors of mammalogy of sixty years ago have retired and have been replaced by better money/grant-attracting specialists in more popular subjects. One of these specialists usually ends up being assigned to teach a mostly lecture course in the natural history of vertebrates, part of which discusses mammals. We need more field workers who love to examine a vista, not so much for its scenery as for its mammalian habitats. They would wonder about the status of those rather ubiquitous indicator mammals, the hispid cotton rats in the case of herbaceous situations and the white-footed mice in the case of woody situations, and their communities of associates. It shouldn't matter whether the vista is Piney Woods,

Panhandle Plains, Coastal Prairie, or Trans Pecos Desert. And we need more specifics about these secretive creatures and how and why they got where they are.

RESPONSE OF TEXAS RODENTS TO PRAIRIE FIRES

Comment by Rollin Baker

In the old days, Texas ranchers used to fire their prairie pastures on purpose usually just before green-up time. Why? These 'managed' conflagrations removed last-year's inedible foliage, stimulated the emergence of new grass, and discouraged woody growth. Nowadays, this purposeful practice is largely abandoned but unregulated prairie fires persist. When these drastic events occur, some of us tender-hearted field mammalogists feel pangs of sadness at the plight of the resident and unable-to-escape small mammals. They can either get singed, totally grilled, or if unharmed and having lost overhead cover provide bountiful lunches for fire-attracted harriers and buteos.

Although we may have some data on what happens to forest-floor mammals when controlled fires clean out duff under such stands as log-leaf pines, most fire ecologists have been concerned with the fate of plant life. We don't have data on the number of kilos of small mammals per hectare lost in expansive prairie fires like those that occurred in Oklahoma and Texas in the early winter of 2005-2006. And my own pitiful contribution (Jour Mammalogy, 21:223, 1940) doesn't help any! We ought to have more quantitative and qualitative information in order to determine the significance of these frequent holocausts on the welfare of our prairie populations of small mammals.

One suggested way to find out would be to analyze the small mammal population on an expansive grassland study area, then fire it presumably in late winter or early spring, and then determine when and how the area's mammalian fauna is reconstituted. Such a before-and-after-study might merit funding and could perhaps be conducted on a cooperating refuge and also might lend itself admirably to a group venture; perhaps as a noteworthy class project.

MAMMALIAN DEATHS AREN'T PRETTY

Comment by Rollin H. Baker

In the movies, the wealthy head of a dynasty succumbs "pleasantly and respectably" of old age by closing his eyes, turning his head to one side, and dropping one hand off the edge of his bed, amid a gathering of all of his relatives except for those he has disowned. Baloney! Take a look at the newspaper,s obit section and read how "uncomfortably" most pass away, but thanks to pain-killing drugs some of the throes related to these fatal "miseries" are alleviated.

And dying is a lot less tidy in the case of other mammals. Old age is rarely attained. Fortunately for the survival of their species, enough individuals reproduce at least once. And the females of small mammals often accomplish procreation as post-weanling subadults. One wonders how much natural selection can function in a system with such a

rapid turnover? I once decided that cotton rats had this "child bride" proclivity finely tuned, since most preserved museum study skins represent not fully grown individuals. What a lousy future for playful cotton rat pups or even otter kits and bear cubs. They rarely if ever live long enough to "cuddle their offspring's offspring!"

When death comes, it's a violent, aggravating, catastrophic, and, shall I say, an "anthropomorphically unsettling" experience. Nonhuman mammals kill to eat or kill to prevent bring eaten. They also employ various means. If I may take the liberty of changing the poet's word "love" to "kill" a mouse predator might ask, "How do I kill thee, let me count the ways?"

Some undignified dispatchments that might befall a cute little harvest mouse include being: swallowed alive by a husky owl; body pierced by a hawk's talon; pounced on by a coyote; skull-crushed by a toothy weasel, suffocated slowly within the coils of a snake, impaled alive on a mesquite thorn by a shrike; and even gut-tormented by an emetic-laced poison bait. And if a predator fails to catch this mouse, its death might still be difficult from struggling to survive an overload of parasites or disease.

Larger creatures have fewer enemies, but their deaths are no less traumatic. In the case of aging elephants some die "horribly" because of extreme tooth wear. In Colorado County, a white-tailed fawn might occasionally lose out to a bobcat, coyote, or feral hound, and, if lucky enough to be a female, she might live a long life before perhaps dying violently. On the other hand, if the fawn is unlucky enough to be a male, he might not live more than 18 months on account of dying tragically from bullet "lead poisoning", unlike Mother Nature intended.

Like has been said many times before, it's a "jungle out there" with no holds barred and "cruelty" and "agony" the way of death.

ADD TO OUR PUBLISHED KNOWLEDGE

Comment by Rollin H. Baker

Add to our published knowledge is the plea of the wise professor to his would-be beginning mammalian scholars. And seriously, a lot of what should be recorded is trivia. To many, the sign of an educated person is the sheer array of trivial information available at her or his immediate beck and call. In polite conversation, the trivially-educated person stands out whether the topic is rocket science, why ammonites died out, feudal English weaponry, Chippewa basketry, Rogers Hornsby's batting average or De Mille's contribution to cinematography.

Goodness knows, a practicing mammalogist needs a trivia quotient of similar magnitude to conduct research as well as the business of lecturing to and advising others. Just as a lawyer must know how to find obscure case law, a mammalogist must be sufficiently well read. When seeking answers, for example, how pocket mice survive in arid Trans Pecos Lower Sonoran, the worker knows where to look to find out how Kalahari gerbils contend with similar environmental problems.

Are mammalogists publishing as much of what I call trivial information about their subject of study as they should? Are field workers who observe "unusual" or distinctive details about mammals neglecting their duty to their science when they don,t add to our

knowledge by publishing accounts of them? The editors of the august Journal of Mammalogy (JM) have recently been turning up their noses at publishing such noteworthy trivia. But early issues of JM feature numerous interesting small details about mammals in a section called General Notes. Happily state and regional journals still cater to the publication of such brief descriptions of mammalian eccentricities, but I wonder whether modern mammalogists may be getting too "aloof" to bother with such "minor" matters. Back in the old days, I was pleased to publish -- among other such observations in JM -- about the difficulties encountered by a nine-banded armadillo as it tried unsuccessfully to swallow (actually just gum, not chew, with its tiny teeth playing only a minor role) a nestling, newly-born eastern cottontail. This half-page comment still gets quoted in papers about both of these mammals. And I kinda like it when they quote me.

Individually or collectively, however, such "trivial" notes bring us a wealth of previously unreported "unknown" details about the nature and activity of mammals. I'm a major booster of this for various reasons one of which was when I once thought it politically correct to slow a little on my Latin American studies and, instead, become a semi-scientific compiler (as my old boss E.R. Hall would say) and produced a bulky Michigan mammal report.

To do this, I used a zillion 3x5 cards (in those pre-computer times) on which to laboriously write down note-derived essentials about my state's mammals, even if the data pertained to the species in Nova Scotia. I made it a point to comb every known periodical that included such trivial entries. Gad, what a gold mine of information that I garnered as a result of this time-consuming duty! How it enhanced and enlivened the species accounts!

Let's keep up the practice of publishing "trivial" facts, brief or extensive, about mammals. Let's broaden and encourage it! We need to write up all details: odd, unique, small, however telling – about these interesting creatures!

ABILENE CHRISTIAN UNIVERSITY

Department of Biology
Box 27868
Abilene, Texas 79699

Thomas E. Lee, Jr.

PHONE: 325-674-2574
FAX: 325-674-2009
EMAIL: lee@biology.acu.ecu

Research Interests, Projects, and Grants: Abilene Christian University Math/Science Grant was used to survey the Mammals of the Eastern Andes in Ecuador this past summer. Grant Goodwiler, Neal Platt, and I collected in the middle elevations of the eastern slope of the northern Andes, a densely forested region approximately 2 km high and 1500 km long that currently remain a mammalogical terra incognita.

We have been tracking the rodent populations of a relic prairie site for ten years and there are many interesting correlations that can be made with other sites in the southwest. This study is being conducted in Taylor County Texas.

Au Sable Institute funded a study of the population dynamics of an old growth forest/bog site and research is progressing. Old growth white pine once dominated Michigan but is almost gone today. The patch of old growth pine gives us a rare opportunity to study the mammals, herps, and birds of this vanishing habitat.

Undergraduate Students and Their Research:

Grant Goodwiler: Elevation gradient analysis of mammals in the eastern Andes of Ecuador

Neal Platt: Elevation gradient analysis of mammals in the eastern Andes of Ecuador.

Shannon Wallis: Mammalian population dynamics of relic prairie

Additional Information: Abilene Christian University Natural History Collection continues to grow and is a valuable research tool.

ANGELO STATE UNIVERSITY

Department of Biology
#10890 ASU Station, San Angelo TX 76909

Loren K. Ammerman

PHONE: (325) 942-2189 ext. 243
FAX: (325) 942-2184
EMAIL: loren.ammerman@angelo.edu
WEB PAGE ADDRESS: http://www.angelo.edu/faculty/lammerma/

Research Interests, Projects and Grants:

Projects:

- Molecular systematics of Molossidae using both nuclear and mitochondrial markers
- Long-term changes in community structure and relative abundance of bat species in Big Bend National Park using mistnet and acoustic recording techniques
- Roosting/feeding ecology of bats in Big Bend National Park

Grants:

- Texas National Guard grant to conduct bat surveys at Camp Swift, Camp Bowie, Camp Mabry, Camp Maxey, and Fort Wolters (with Robert Dowler).
- North American Bat Conservation Partnership grant (Bat Conservation International) with Tom Kunz to use thermal imaging techniques to census *Leptonycteris nivalis* in Big Bend National Park
- USDA Sustainable Agriculture and Water Conservation grant with Robert Dowler to conduct a mammal survey of the Rio Grande Corridor/Terlingua Creek drainage, Brewster County, Texas

Graduate Students and Their Research:

Gema Guerra – Genetic variation in *Spilogale gracilis* based on mitochondrial markers (M.S. thesis project, co-advised with Robert Dowler) and Relationships of African shrew genera based on cytochrome b (graduate research project, in collaboration with Robert Baker).

Molly McDonough- Genetic, karyotypic, and morphological variation in Wagner's Bonneted Bat (*Eumops glaucinus)* (M. S. thesis project)

Dawn Weir – Characterization of an enterotoxin A producing strain of coagulas negative *Staphylococcus* (M. S. thesis project)

Undergraduate Students and Their Research:

Amy Bishop – Taxonomic affinity of the African molossid genus *Myopterus* based on 16S/ND1 sequence (undergraduate research project)

Eeshita Dastidar – Phylogenetic distribution of VES SINEs in Chiropteran families (Carr Research Scholar)

Additional Information: Currently, I am looking for motivated students that would like to earn their Master of Science degree in mammalogy/systematics using either field or laboratory techniques (or a combination of both).

Robert C. Dowler

PHONE: (325) 942-2189 x239
FAX: (325) 942-2184
EMAIL: robert.dowler@angelo.edu
Web page address: http://www.angelo.edu/dept/biology/Faculty/rcd/rcd.htm

Research Interests, Projects, and Grants:
My current research in Texas includes assessing bat species at Texas National Guard Training sites (with Dr. Loren Ammerman) and surveying mammals on the Rio Grande Corridor through a grant from USDA also with Loren Ammerman. My international research continues in the Galapagos Islands, with plans to examine genetic variability of rodents there this summer with Dr. Cody Edwards.

Graduate Students and Their Research:
Three students, Josh Coffey, Amy Vestal, and Sharon Ziadeh completed their M.S. degrees this past year. Their research topics, respectively, were skunk home range and den site selection, systematics of *Sylvilagus robustus*, and caching behavior of *Spermophilus mexicanus*.

Carla E. Ebeling -- Carla is finishing thesis research on comparison of track plates and Trailmaster camera systems for surveying medium-sized mammals in arid environments with emphasis on skunk species.

Gema Guerra -- Gema will begin to assess genetic variation in the western spotted skunk, *Spilogale gracilis*. Her thesis committee is co-chaired with Loren Ammerman.

Rustin Tabor -- Rustin has just begun graduate school and has not selected a thesis topic.

Undergraduate Students and Their Research:
Ben Frogge -- During the past year Ben has been managing our dermestid colony and assisting with radiotelemetry of a hog-nosed skunk, *Conepatus leuconotus.*

ANGELO STATE UNIVERSITY
Biology Department
Cavness Science Bldg. 108A
San Angelo, TX 76904

Chris T. McAllister, Ph.D.

PHONE: 325/942-2189, ext 234
FAX: 325/942-2184
EMAIL: chris.mcallister@angelo.edu
Web page URL: http://www.angelo.edu/dept/biology/Faculty/cm/cm.htm

Research Interests, Projects, and Grants: Primary research concerns the geographic distribution, coccidian and helminth parasites, and ecology of amphibians, reptiles and small mammals (bats, rodents). Secondary research continues on systematics and

geographic distribution of millipeds and centipedes of the southwest. Some of this research appeared in 2005 in Herpetological Review, Western North American Naturalist, Comparative Parasitology, Entomological News, Texas Journal of Science, and Journal of the Arkansas Academy of Science.

Additional Information: I am currently a Visiting Assistant Professor of Biology at ASU. Research collaborations are on-going with Drs. Stan Trauth (Ark. St. Univ.), Chuck Bursey (Penn. St.-Shenango), Rowland Shelley (NC St. Mus. Nat. Sci.), Van Wallach (Harvard Univ.), Henry Robison (Southern Ark. Univ.), Robert Dowler (ASU), and Loren Ammerman (ASU). I continue serving the Arkansas Academy of Science as Managing Editor of the Journal. My recent collection of a dicephalic western diamondback rattlesnake made local, state, national and international news (see: http://www.angelo.edu/services/news_information/new_releases/2005/Oct/10-12-05B.htm). Voucher specimen was deposited in the Angelo State Natural History Collection. A followup story appeared in Reptiles Magazine (Feb. 2006, page 8).

BAYLOR UNIVERSITY
Dept. of Biology
Waco, TX 76798-7388

Kenneth T. Wilkins

PHONE: 254 710-2911
FAX: 254 710-3870
EMAIL: ken_wilkins@baylor.edu

Research Interests, Projects, and Grants: Our projects generally relate to ecology and distribution of small mammals at the population and community levels.

Recent funding is from the Nature Conservancy of Texas, Texas Parks & Wildlife Department, American Museum of Natural History (Theodore Roosevelt Fund), and assorted private foundations.

Graduate Students and Their Research:

Cathy Early, Ph.D. Response of small mammals in native tallgrass prairie to an invasive species (red imported fire ants, *Solenopsis invicta* Buren). **Graduated** May 2005!! Dr. Early is now an assistant professor in Biology at University of Mary Hardin Baylor in Belton, Texas.

Three newly-arrived graduate students are working to identify their thesis and dissertation projects. At this time, it looks like bat ecology is a likely area of research.

Anne Merchant is a M.S. student with her undergraduate degree from the

University of Texas, Austin.
Jeff Mink is a doctoral student with his B.S. from Texas A&M and M.S. from Texas State University.
Tommy Pettit is a doctoral student from Arizona State University.

Additional Information: Opportunities are available for graduate study in the Department of Biology, Baylor University. Graduate assistantships are available beginning Fall 2006 in our doctoral program. The institutional financial package is generous and includes support as a graduate teaching assistant (12-month support @ approximately $1,300 monthly), tuition remission, and University-subsidized health insurance for GTAs. Faculty expertise in our department ranges from aquatic ecology to genetics to molecular biology… and, of course, includes mammalogy.

The majority of our graduate students and graduate faculty pursue research in ecological topics, all in connection to stewardship of our natural world and/or to solution of real-world environmental issues, including those related to human health. BU biologists pursue numerous research projects related to *terrestrial ecology*. Prof. Kevin Gutzwiller, a landscape ecologist and conservation biologist, studies effects of wildland recreational disturbance and landscape characteristics on the structure and dynamics of bird communities. Prof. Ken Wilkins (also interim graduate program director) works with small mammals, primarily rodents and bats, in various ecological areas including invasion ecology and community structure, urban ecology, and biogeography. Prof. Walter Holmes specializes in floral surveys and systematics of flowering plants. Dr. Robert Adams is a systematic botanist who uses molecular techniques to study plant speciation, especially in *Juniperus*.

BU Biology has been a long-time contributor to studies in *limnology and aquatic biology*. Prof. Owen Lind and colleagues, for example, have conducted research on water quality and trophic ecology in Lake Chapala , Mexico, for more than 20 years and have studied reservoir ecology for over 3 decades at BU. Dr. Darrell Vodopich and his students have collaborated in many of these aquatic ecology projects. We are currently investigating the feasibility of establishing field research programs in the state of Veracruz, Mexico. Dr. Robert Doyle (also department chair) specializes in restoration of wetlands systems and reservoir ecology. Dr. Ryan King has recently joined our faculty and has established a research program and graduate courses in stream ecology and advanced ecological data analysis. These aquatic scientists conduct research with colleagues in affiliated programs, including Dr. Bryan Brooks and Dr. Jason Belden in Environmental Studies, whose specialty is in aquatic toxicology, and Dr. Kevin Chambliss, an environmental chemist.

Other faculty conduct research that spans the *aquatic-terrestrial interface*. Dr. Joseph White contributes significantly to both aquatic and terrestrial groups via strength in ecosystems modeling and geographic information systems. Dr. Rene Massengale is an environmental microbiologist; her ongoing research includes microbial ecology of pathogens in rivers and streams and these reservoirs into which they flow as well as environmental microbiology of dust aerosols from agricultural processes. Prof. Keith

Hartberg and Dr. Rick Duhrkopf are mosquito geneticists who pursue questions of health importance, e.g., West Nile virus. Prof. Hartberg specializes in genetics and bionomics of mosquitoes. Dr. Duhrkopf studies the ecology and behavior of mosquitoes and on patterns of transmission of mosquito-borne diseases.

CENTER FOR DISEASE CONTROL

Poxvirus Program
1600 Clifton Rd MS G-43
Atlanta, GA 30333

Darin S. Carroll

PHONE: 404-639-1719
FAX: 404-639-1060
EMAIL: dcarroll@cdc.gov

Research Interests, Projects, and Grants: Currently our lab is involved in laboratory and field studies involving *Orthopoxvirus* ecology and evolution in Africa and the Americas, with the goal of reducing the foreign and domestic public health impact of members of this viral genus.

Additional Information: Several opportunities throughout CDC exist for fellowships (http://www.cdc.gov/ncidod/eid/vol1no3/fellow.htm) for all levels of students (undergraduate through Doctoral) as well as at the post-doctoral level (http://www.cdc.gov/eis/) for individuals interested in a career in public health. The listed links are two of the many programs that can be found at www.cdc.gov. Consult each posting for the list of deadlines and materials required.

GEORGE MASON UNIVERSITY

Department of Environmental Science and Policy
4400 University Dr., MSN 5F2
Fairfax, VA 22030

Cody W. Edwards

PHONE: (703) 993-1040
FAX: (703) 993-1066
EMAIL: cedward7@gmu.edu

Research Interests, Projects, and Grants: Research interests include systematics, molecular phylogenetics, conservation genetics, and evolution in vertebrates with special interests given to mammalian systems. Specifically: Ecology, evolution, and conservation

of native rodents in the Galapagos Islands with special interest on the role of introduced species (e.g. Rattus rattus, Rattus norvegicus, and Mus musculus) in the decline and extinction of native rodents (collaboration with Dr. Robert C. Dowler, Angelo State University). Examination of hybrid zones between genetically distinct taxa; including isolating mechanisms and the dynamics of genetic introgression. Applications of geometric morphometrics to studies of phylogeny and ontogeny of mammals. Growth and utilization of natural history collections, especially those pertaining to mammals. Natural history (surveys, etc.) and distributions of mammalian species.

Current Funding (2005):
"Preserving the Galapagos Islands: Conservations Genetics, Evolution, and Conservation Strategies Involving Endemic Galapagos Rodents". Summer Research Funding for Tenure Track Faculty, George Mason University.

"Population structure of carnivores at Quantico Marine Corps Base, Virginia". Department of Defense.

"Carnivores of Prince William Forest Park: community structure, movement patterns, and conservation concerns". National Park Service (U. S. Department of Interior).

Graduate Students and their Research:
Mike Jarcho (M.S. student) --- Retracing the historical introduction and spread of three introduced rodent species in the Galápagos Islands, Ecuador.

Sarah Johnson (Ph.D. student) --- Conservations Genetics, Evolution, and Conservation Strategies Involving Endemic Galapagos Rodents. Sarah, Dr. Robert Dowler (Angelo State University), and I will be returning to the Galapagos this summer.

Laura Lakeman (M.S. student) --- Carnivores of Prince William Forest Park: community structure, movement patterns, and conservation concerns.

Jeff Streicher (M.S. student) --- Genetic variation among members of the *Craugastor* (*Eleuthetrodactylus*) *podiciferus* species complex (Cerro Utyum robber frog). Jeff and I have two research trips planned this spring in Costa Rica.

Katherine Bryant (M.S. student) --- Project TBD (will begin work in January 2006).

Jeff Farabaugh (M.S. student) --- Assessing potential relationships between microclimate variables measured within an oak-hickory forest patch and the presence of interior forest birds.

Undergraduate Students and their Research:
Kristen Baird --- Confirmation of Wild Tundra and Trumpeter Swan Hybrid Populations in Alaska.

Juan Rodriguez --- Utilization of scat as a means of assessing genetic structure of black bear populations in northern Virginia.

LAREDO COMMUNITY COLLEGE

Science Dept.
West End Washington St., Laredo, TX 78041

Timothy Koneval

PHONE: (956) 721-5198
FAX: (956) 721-5892
EMAIL: tkoneval@laredo.edu

Research Interests, Projects, and Grants: xenarathran anatomy and systematics; mammalian hindlimb anatomy

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McMURRY UNIVERSITY

PO Box 1088
Fort Davis, TX 79734-0012

Robert E. Martin (Emeritus)

PHONE: (432) 426-2061
EMAIL: martinre@direcway.com

Research Interests, Projects, and Grants: Continue interest in research on the Texas Kangaroo Rat.

Additional Information: I retired from McMurry University at the end of the Spring Semester 2005. I was pleased that Dr. Joel Brant, dedicated TSM member, was hired by McMurry University for the vertebrate biology position created by my retirement. In 1997, my wife Patty and I acquired a small "ranchette" in the Davis Mountains of West Texas, west of Bloys Campground. We plan to make the Davis Mountains our new home. Stop by and visit if you are in the area or need help with a flat tire!

McMURRY UNIVERSITY
Department of Biology
Abilene, TX 79697-0368

Joel G. Brant

PHONE: (325) 793-3875
FAX: (325) 793-4770
EMAIL: brant.joel@mcm.edu

Research Interests, Projects, and Grants:
My research interests are primarily concerned with the natural history of mammals, particularly in Texas and the Chihuahuan Desert. I am currently setting up a research program for myself and selected undergraduates that will focus on the natural history & ecology of mammals in the southern Rolling Plains, northern Edwards Plateau, and northeastern Chihuahuan Desert.

MIDWESTERN STATE UNIVERSITY
Dept. of Biology,
Wichita Falls TX 76308

Frederick B. Stangl, Jr.

PHONE: (940) 397-4408
FAX: (940) 397-4831
EMAIL frederick.stangl@mwsu.edu

Research Interests, Projects, and Grants: My work involves a variety of aspects of mammalogy, mostly centered in Texas, Oklahoma, and New Mexico. Primary emphasis is an examination of the current spatial and temporal status (distribution, genetics, morphology) across Texas of two species of ground squirrels (*Spermophilus mexicanus* and *S. tridecemlineatus*).

Graduate Students and Their Research:

Danielle Grant: reassessment of the Oklahoma chromosomal hybrid zone in *Peromyscus leucopus*
Heather Foster: functional and systematic aspects of morphological features of rodent incisors
Brandon McDonald: status of the muskrat in southwestern Oklahoma
Laura Harmon: production of *Spermophilus mexicanus/tridecemlineatus* F1 hybrids in captivity
Sam Kelly: comparative hematology of raccoons from north Texas
Kimberly Miller: seasonal hematology variation in cotton rats from north Texas
Shane Spinks: small mammals from the southern Guadalupe Mountains of New

Mexico

Undergraduate Students and Their Research:

Amanda Snook: temporal genetic variation of two species of *Spermophilus* from an area of hybridization

Steve Jang: variation in iron content in the incisors from three genera of shrews

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Oklahoma State University

Department of Zoology
430 Life Sciences West
Stillwater, OK 74078

Karen McBee

PHONE: 405-744-9680
FAX: 4 05-744-7824
EMAIL: mcbee@okstate.edu
Web page URL: http://zoology.okstate.edu/zoo_fclt/mcbee.htm

Research Interests, Projects, and Grants: My lab uses several techniques to investigate relationships between exposure to environmental pollutants and detrimental effects in wildlife species and to explore how induced genetic damage may translate into long-term population demographic effects. I also am interested in mammalian systematics, evolution, and ecology and am Curator of Vertebrates for the Oklahoma State University Collection ofVertebrates.

Ron Van Den Bussche

PHONE: 405-744-9679
FAX: 405-744-7824
EMAIL: ravdb@okstate.edu
Web page URL: http://www.okstate.edu/artsci/zoology/ravdb/

Research Interests, Projects, and Grants: My research interests primarily focus on molecular systematics and population/consrvation genetics.

SAM HOUSTON STATE UNIVERSITY

Department of Biological Sciences
Box 2116
Huntsville, TX 77341

Monte L. Thies

PHONE: (936)294-3746
FAX: (936)294-3940
EMAIL: woodrat@shsu.edu
Web page URL: //www.shsu.edu/~bio_mlt

Research Interests, Projects, and Grants:
Director for the SHSU Center for Biological Field Studies. Ongoing work at the field station includes structural improvements, habitat management, and general research project coordination. Additional information about our field station and possible use in class or research usage may be obtained through our website at //www.shsu.edu/~bio_www/cbfs.htm.

Current research focuses on field studies of West Nile Virus, Dengue Fever, and Chagas' Disease at points along the Texas-Mexico border between McAllen and Brownsville; establishment of the Sam Houston Disease Vector Program with its associated BioSafety Level 2 (BSL2) Diagnostic Laboratory for handling material collected in field projects; and implementation of in-depth field sampling of vectors and reservoirs.

Small mammal surveys, including recently completed projects for two Texas Army National Guard training sites, which incorporate comprehensive survey of the mammals present on both sites.

Application of vertebrate anatomy and environmental toxicology to forensic studies. Recent work includes an atlas and key of terrestrial mammals for the state of Texas with scanning electron micrographs (Anica Debelica, MS in Biology, 2005).

Graduate Students and Their Research:
Brandy Nunez-Dalton – development of a new rapid assessment tool for West Nile detection. Brandy is developing and new ELISA-based detection system and field testing three different analytical systems on small mammal and bird species in east Texas

Jessica Jemison – small mammal assemblages on the SHSU Center for Biological Field Studies. Jessica will be conducting a survey of mammals on the 250 acre field station and comparing species assemblages among habitat types.

Undergraduate Students and Their Research:
J. Kelly Forson – museum methods in mammalian osteology. Kelly is preparing skeletal material from specimens donated to the SHSU Vertebrate Natural History Collections by the Houston Zoo.

SHELDON JACKSON COLLEGE
801 Lincoln Street
Sitka, Alaska 99835

Art Cleveland

PHONE: 907-747-5202
FAX: 907-747-2594
EMAIL: acleveland@sj-alaska.edu

Research Interests, Projects, and Grants: Final report to Georgia DOT, December 2005 on grant for work on environmental factors influencing bat roosts under bridges in Georgia

Graduate Students and Their Research: Jenny Jackson, currently completing her thesis at Columbus State University (my last grad student there) on Bats under Bridges. Jenny is now in Pocatello, Idaho working in state wildlife conservation.

Additional Information: Vicki and I are enjoying the southeastern Alaska environment with whales, seals, sea lions, eagles, ravens and bears.

TARLETON STATE UNIVERSITY
Department of Biological Sciences
Box T-0100
Stephenville, TX 76402

Russell Pfau

PHONE: 254-968-9761
FAX: 254-968-9157
EMAIL: pfau@tarleton.edu
Web page URL: http://www.tarleton.edu/~biology/pfau

Research Interests, Projects, and Grants: I'm interested in molecular ecology and evolution, particularly at the population-species interface. My current research efforts use microsatellite, AFLP, and mitochondrial DNA sequence analysis to infer patterns of genetic diversity and divergence in a variety of taxa. Projects other than those listed below include comparing levels of genetic diversity in island and mainland populations of *Peromyscus maniculatus* from southern California and Baja California, Mexico (in collaboration with Adam Richman at Montana State University), mapping and characterization of a newly discovered hybrid zone between two divergent lineages of the hispid cotton rat (Sigmodon hispidus) in the U.S., and isolation and characterization of microsatellite loci from the hispid cotton rat.

Graduate Students and their Research:

Kristin Denton - Molecular evolution of an immune response gene (*MHC-DQA*) in two species of *Peromyscus*.

Terry Johnson - Phylogeography of the Texas mouse (Peromyscus attwateri) across its entire geographic distribution using AFLP analysis.

Undergradute Students and their Research:

Calvin Henard - Hybridization between two divergent lineages of cotton rats in Texas: a mitochondrial DNA perspective

Endra Sookor – PCR amplification and sequencing of the ZP3 gene (a gametic-compatibility protein) in the hispid cotton rat (*Sigmodon hispidus*)

Sunni Taylor – PCR amplification of Y-chromosome markers in the hispid cotton rat (*Sigmodon hispidus*)

Phil Sudman

PHONE: 254-968-9154
FAX: 254-968-9157
EMAIL: sudman@tarleton.edu
Web page URL: www.tarleton.edu/~sudman

Research Interests, Projects, and Grants: Ecology and population genetics of the Texas kangaroo rat (*Dipodomys elator*); genetic determination of cryptic species of *Geomys*; genetics of Attwaters prairie chicken.

Graduate Students and Their Research:

Lauri Heintz: small mammal response to habitat changes associated with black-capped vireo habitat restoration.

Additional Information: Looking for students interested in rodent population genetics.

TEXAS A&M UNIVERSITY

College Station, TX 77843-2258

Ira F. Greenbaum

PHONE: 979-845-7791
FAX: 979-845-3114
EMAIL: i-greenbaum@tamu.edu
WEB PAGE ADDRESS: http://www.bio.tamu.edu/FACMENU/faculty/greenbau.htm

Research Interests, Projects and Grants:

The research in this laboratory addresses questions concerning mammalian evolution,

cytogenetics and systematics, and is currently focused on resolving the systematics and processes of evolution of the *P. maniculatus* species group. Our recent studies include analyses of: mtDNA variation in relation to the phylogeogeography of the western coastal deer mice including *P. keeni*, *P. sejugis*, and *P. maniculatus* and among and between the species in the *P. maniculatus* and *P. leucopus* species groups. We hope to soon reinitiate our studies of the evolution and genetic mechanism of chromosomal fragile sites *Peromyscus*.

Recent Graduates:
Mindy Walker. Ph.D. Biology, December 2005. Dissertation "Mitochondrial-DNA Variation and the Evolutionary Affinities of the *Peromyscus maniculatus* Complex from Western North America."

Graduate Students and Their Research:
Julie Hayes. Masters student (non-thesis)

Rodney L. Honeycutt

PHONE: 979-847-9462
FAX: 979-845-4096
EMAIL: rhoneycutt@tamu.edu
Web page URL: http://www.tamu.edu/honeycutt/

Research Interests, Projects, and Grants: My research interests are in the molecular phylogenetics of mammals and conservation/population genetics. The following is a list of projects in my laboratory: 1) Population Biology and Population Genetics of White-tailed Deer – This project is funded by the Samuel Nobel Foundation and involves detailed studies of the population dynamics and breeding biology of white-tailed deer. 2) Evolutionary Ecology of New World Cichlids – This project is in collaboration with Dr. Kirk Winemiller and is funded by the National Science Foundation. We are constructing a phylogeny of New World cichlids based on both molecules and morphology, and this phylogeny is being used as interpretive framework for investigating convergent evolution and adaptive radiations in South American and Middle America cichlids. 3) Molecular Phylogenetics of Caviomorph Rodents – I am actively involved in the phylogenetics of hystricognath rodents. 4) Conservation Genetics – We have projects on ocelot in Texas and Mexico and pygmy owls in Texas, Mexico, and Arizona. These involve both phylogeography and population genetics.

Graduate Students and Their Research: 1) Jason Sumners (Ph.D. in WFSC) – Population genetics of free-ranging populations of white-tailed deer. 2) Igor Vilchez (Ph.D. in Zoology) – Molecular phylogenetics of caviomorph rodents. 3) Jan Janecka (Ph.D. in WFSC) – Population genetics of ocelot. 4) Juan Manuel Anzola (Ph.D. in Biology) – Comparative genomics and development of tools for identifying orthologous/paralogous sequences and microRNAs. 5) Oranit Gilad (Ph.D. in Zoology) –

Landscape ecology of endangered species. 6) Mathias Tobler (Ph.D. in WFSC) – Ecology and population biology of tapir from Peru.

Undergraduate Students and Their Research: 1) Rosemarie Almonaci – studies of sex ratios in pygmy owls and screech owls. 2) Angeline Zamorano – population genetics and phylogeography of the grey fox.

TEXAS A&M UNIVERSITY—KINGSVILLE

700 University Blvd., MSC 228
Kingsville, Texas 78363

Scott Henke

PHONE: 361-593-3689
FAX: 361-593-3788
EMAIL: scott.henke@tamuk.edu

Research Interests: Mammalian disease; human-wildlife conflict

Graduate Students & Research:

Amy Kresta (Ph.D.) *Baylisascaris procyonis*: Habitat characteristics, food habits, and potential routes of transmission in infected raccoons

Debbie Little (Ph.D.) Longevity of *Baylisascaris procyonis* eggs in selected solutions and environments

Denise Ruffino (Ph.D.) Ecology of skunks in Texas, with emphasis on the role of rabies

Antonio Cantu (Ph.D.) White-tailed deer and nilgai as reservoirs for Texas tick fever

David Long (M.S.) Comparison of rodent and insect communities between native and exotic grasslands

Christy Wyckoff (M.S.) Interactions between feral and domestic swine, with emphasis on the role of pseudorabies and brucellosis

Jorge Cortez (M.S.) Assessing Maritime pocket gophers at NAS-Corpus Christi and NALF-Waldron Station

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TEXAS A&M UNIVERSITY—KINGSVILLE

Caesar Kleberg Wildlife Research Institute
MSC 218, 700 University Blvd.
Kingsville, TX 78363

Michael Tewes

PHONE: 361-593-3972
FAX: 361-593-3924
EMAIL: michael.tewes@tamuk.edu
Web page URL:
http://ckwri.tamuk.edu/feline

Research Interests, Projects, and Grants:
Ecology, Genetics and Conservation of Small Wild Cats

Graduate Students and Their Research:
Arturo Caso (Ph.D.) - Jaguarundi and ocelot coexistence and land tenure in northeast Mexico.

Jan Janecka (Ph.D.) - Conservation genetics, population structure, and genetic erosion in ocelots of the Tamaulipan Biotic Province.

Aaron Haines (Ph.D.) - Viability analysis, population persistence, and recovery alternatives of the relict ocelot population in the United States.

John Young (Ph.D.) - Distribution and population viability of mountain lions of Texas.

TEXAS PARKS AND WILDLIFE

Department 3000
S IH 35, Suite 100
Austin TX, 78704

Meg Goodman

PHONE: 512-912-7042
FAX: 512-912-7058
EMAIL: meg.goodman@tpwd.state.tx.us
Web page URL: www.tpwd.state.tx.us

Research Interests, Projects, and Grants: Bats

Additional Information:
Please contact me if you would like to be added to the Texas Bat Working Group distribution list.

TEXAS TECH UNIVERSITY
Department of Biological Sciences
Lubbock, TX 79409-3131

Robert J. Baker

PHONE: (806)742-2702
FAX:(806)742-2963
EMAIL: rjbaker@ttu.edu
Website: *www.biology.ttu.edu* and *www.nsrl.ttu.edu*

Research Interests, Projects and Grants:
Robert J. Baker's interests encompass the ability to dissect the genome in an effective way to provide resolution to problems concerned with systematics, conservation, biodiversity, genotoxicology, agriculture, etc. Major projects in the lab include understanding the biological consequences of the meltdown of the nuclear reactor at Chornobyl, understanding chromosomal evolution (especially using fluorescent *in situ* hybridization), providing genetic markers for cultivars of cotton, and my first love, determining the systematics of the New World leaf-nosed bats (Family Phyllostomidae). We finally published the trees based on DNA sequence data and provide a new classification that recognizes 11 subfamilies (2003. *Occasional Papers of the Museum of Texas Tech*. i+1-32). We will gladly give you a hard copy if you want one or you can access it online at http://www.nsrl.ttu.edu/pubs/opapers/ops/OP230.pdf. Carl Phillips and Baker made a trip this summer to Kazakhstan and Kyrgyzstan and hope to develop funding to do biodiversity and zoonoses studies there.

RJB has spent most of the last 8 months writing on a paper entitled, "Speciation in Mammals and the Genetic Species Concept." This paper is just about finished.

Steven R. Hoofer joined the lab in February 2003 as a post-doctoral research associate. His research focuses on systematics and evolutionary problems in mammals. *srhoofer@hotmail.com*

Graduate Students
Adam Brown is currently finishing his Masters degree and is in the process of applying to Doctoral programs. He is a member of the Chornobyl Low Dose research team. Adam's main focus is the expression profiling of certain DNA repair and free radical scavenging pathways upon exposure to chronic low levels of ionizing radiation. *adam.d.brown@ttu.edu*

Juan Pablo Carrera is a second year Masters student who joined to the team in January 2004 He is interested in Museum Science, natural history, biogeography and systematics of the Neotropical fauna, specially bats. Juan Pablo is involved in some projects about the distribution of bats in the western side of the Ecuadorian Andes. Furthermore, he is involved in the organization and curation of the mammal collection and the vital tissue collection at the NSRL. *juan.p.carrera@ttu.edu*

Faisal Ali Bin Anwarali Khan joined the lab to work on a Master's degree in systematics in the beginning of 2006. His education before coming to Texas Tech was in Malaysia and his interest is in the fauna of Borneo.

Michelle Knapp is a second year doctoral student. She graduated in June 2004 from Harvard with a bachelor's degree in biology. Michelle is studying the molecular phylogenetics of Neotropical *Myotis* using cytochrome b. Her dissertation work will be to use forensic science methodology to gather DNA sequence from museum specimens. Dr. Kim Nelson, who works with Mitotyping, a research business that works in forensics, will direct Michelle in developing these technologies. *michelle.knapp@ttu.edu*

Peter Larsen graduated with his Master's degree in December 2005. His thesis topic was concerned with the zoogeography and biodiversity of *Artibeus jamaicensis*. *plarsen01@yahoo.com*

Kathy MacDonald is a doctoral student. Her research interests focus on behavior and management of captive mammals, particularly stereotypic behavior in captive carnivores. In 2003, she received her M.A. in Museum Science where her focus was the collection management and registration of zoological and natural history specimens. She currently oversees the Genetic Resource Collection Inventory and Reorganization Project at the Natural Science Research Laboratory where she has been employed since 2002. *kathy.macdonald@ttu.edu*

Heather Meeks is a second-year PhD student in Dr. Baker's lab. She is assessing the effects of chronic environmental exposure to radiation on mammal systems in Chornobyl, Ukraine. Her primary focus is evaluating patterns of genetic diversity in exposed rodent populations, using a number of different DNA motifs, to elucidate potential genotoxicity resulting from radiation exposure. *hnmeeks@yahoo.com*

Hugo Mantilla-Meluk joined our program for a PhD degree in August 2002. Hugo is a native of Colombia and received his degree under the direction of Alberto Cadena and Thomas R. Defler, at the Universidad Nacional de Colombia. He has been working on mammalian diversity and ecology in different countries of the Neotropics including Colombia, Peru, Costa Rica, and Panama. His interests include a variety of aspects of ecology, evolution, systematics, and patterns of diversity of mammals of the Neotropics. His research is focused on two groups: Primates of the Colombian Amazon Region, and Neotropical bats. He has worked for the Organization for Tropical Studies at Duke University campus as a visiting scholar. His goal is to combine the macro and micro evolutionary approaches to contribute to the knowledge of patterns of biodiversity in the Neotropics. Besides this work, he is interested in modelling patterns of biodiversity using GIS based methods and he is in charge of the Colombian data set for the MaNIS project. Hugo received the Karl Koopman award from the North American Bat Research group for his presentation on the ecological information relative to speciation in the hybrid zone of *Uroderma bilobatum*, and his model of Genetic Isolines applied to the study of bat speciation received the second place to the Best Analytical Presentation at

the International Conference of ESRI users in August 2005. Hugo is in charge of the program of cooperation between Texas Tech University and the Universidad Nacional and the Universidad Tecnológica del Chocó in Colombia. *hmantill@ttacs.ttu.edu*.

Donelle Schwalm joined the lab as a Masters student in January 2005. She originally hails from Midland, South Dakota. She received her bachelor's degree in Biology from Adrian College in Adrian, Michigan in 2000. For her graduate research, Doni is using microsatellites to assess gene flow rates and genetic structuring in the swift fox, *Vulpes velox*. Subpopulation groupings identified during genetic analysis will be mapped in ArcGIS. After subpopoluation boundaries are delineated, correlated landscape features (natural and anthropogenic) will be identified, providing insight into the influence of landscape structure on genetic diversity in swift fox. In addition, she is conducting a scat-based presence-absence survey for *V. velox* in 39 counties in the Texas panhandle. Scats will analyzed using mitochondrial markers to determine the depositing species. In July, The National Fish and Wildlife Foundation awarded a $34,000 grant to Ms. Schwalm and her co-advisor, Dr. Warren Ballard in the Department of Range, Wildlife and Fisheries Management, to fund swift fox research. *doni.schwalm@ttu.edu*

Miguel Pinto from Ecuador just joined the PhD program this semester. He has wide interests in the study of mammals varying from the study of associated parasites and diseases to their morphological variation and systematics. His current research is focused in the morphological and molecular variation in some New World bats (Phyllostomidae, Vespertillionidae). *miguel.pinto@ttu.edu*

Sergio Solari is a Ph.D. candidate (fourth year student) from Peru. His research is focused on the assessment of congruence between morphological characters and phylogenetic analyses of molecular data for several genera of small mammals, some of them being part of the research by other students in the lab. Current projects include the systematics and taxonomy of Didelphidae genera Monodelphis and Marmosa, as well as bats of the genera Carollia, Dermanura, Lonchophylla (Phyllostomidae) and Thyroptera (Thyropteridae). His main research involves (a) phylogeography of two species-group of short-tailed opossums (Monodelphis), using the cytochrome b gene, (b) morphological diagnoses of the resulting clades, some of which may represent new species, and (c) diversification of the whole genus in South America. He received the Shadle Fellowship during the 85th Annual meeting of the ASM. *sergio.solari@ttu.edu*

Vicki Swier is a doctoral student studying the role of LINEs in the mammalian genome, particularly in the South American Sigmodontine rodents where LINEs may be extinct. She is utilizing chromosomal banding and cross species chromosome painting to elucidate the systematic relationships between three species of *Carollia*. During a field methods class to Mexico, she spent the two weeks improving karyotyping and skinning skills. *vicki.swier@ttu.edu*

Undergraduate Students

Robert Bull, Jim Bull's son, is a sophomore undergraduate. He has worked on several projects but will present a paper at the upcoming meeting on Dermanura. Robert's main

interest is in chemistry and he probably will ultimately major there. Currently he is deciding whether to pursue a major in Biology of Biochemistry.
junglebalistic@hotmail.com

Genevieve Kendall is a junior Cell and Molecular major, and has been a member of Baker's lab for almost three years. She was accepted into the Howard Hughes Fellowship program at the beginning of the Fall 2003 semester. Genevieve is currently working on the systematics of Microtus collected from Ukraine.
genevieve.c.kendall@ttu.edu

Former Students
Emma Dawson graduate with a Doctorate degree in Land Use Planning Management and Design with the dissertation title: "Predicted species richness in the Chihuahuan Desert: a GIS analysis of spatial and ecological data." She currently is employed as a Senior Planner at Keith and Associates, Inc. in Pompano Beach, Florida.

Additional Information
A significant event in our mammalogy and museum science program here at Tech is the new wing of the Natural Science Research Lab which Texas Tech took possession of in December 2005. This building resulted from a gift of $5 million from the Ben E. Keith Company. The mammal range will be moved into the new wing where they will be archived on compactors, which will allow us to triple our holdings of mammal specimens. We are currently over 100,000 specimens. Part of the contract for the addition of the new building includes tripling of the space available for the genomic resources (new big name for the frozen tissue) collection. The additions to this part of the NSRL will result in greater security and electronic surveillance. We have received 200 new cases and have started the move into the new building. We expect to have ribbon-cutting sometime in the next 6 weeks. Everyone will be welcome.

Robert D. Owen

PHONE: (806) 742-3232
FAX: (806) 742-2963
EMAIL: rowen@conexion.com.py

NEW ADDRESS:
Martín Barrios 2232 c/ Pizarro
Barrio Republicano
Asunción, Paraguay
PHONE: 595 (981) 498-048
FAX: 595 (21) 300-733

Research Interests, Projects and Grants:
Mammalian systematics, zoogeography, and evolution with emphasis on Neotropical

fauna.
Multivariate statistical methods in systematics and evolution.
Philosophy and methodology of vertebrate phylogenetics.
Systematics and biogeography of small mammals in the western Transverse Volcanic Belt region of Mexico.
Systematics, biogeography, ecology, and conservation of Paraguayan mammals.
Evolution, systematics, and ecology of hantavirus and other mammalian-borne viruses.

Current Projects and Grants:

"The Impact of Rapid Anthropogenic Land Cover Change in the Chaco and Interior Atlantic Forest in Paraguay on Hantavirus Ecology". 2004-2008. National Institutes of Health, as subcontract from Southern Research Institute.

"CREST Center for Excellence in Bioinformatics and Computational Biology". 2004-2006. National Science Foundation, as subcontract from New Mexico State University.

Graduate Students and Their Research:

Carl W. Dick defended his dissertation and finished his Ph.D. in May 2005. Carl accepted a 2-year post-doctoral research position at the Field Museum of Natural History, and began that work after defending his dissertation.

Alisa Abuzeineh defended her thesis and finished her M.S. in November 2005. Alisa is considering Ph.D. programs, and will begin her doctoral program in September.

Noé de la Sancha is in his third year of graduate work. He is examining ecological, distributional, and community aspects of small marsupials in Paraguay. He spent the summer and fall of 2005 in Paraguay, conducting field work and developing collaborative relationships with several non-governmental organizations.

Robert D. Bradley

PHONE: (806) 742-2725
FAX: (806) 742-2963
E-MAIL: robert.bradley@ttu.edu
WEB PAGE: Biology - http://www.biol.ttu.edu/
Museum - http://www.nsrl.ttu.edu/

RESEARCH INTERESTS, PROJECTS, AND GRANTS:

My research interests include systematic relationships, molecular evolution, and natural history of mammals, particularly in geomyoid and sigmodontine rodents. Examination of hybrid zones between genetically distinct taxa; including isolating mechanisms and the dynamics of genetic introgression. Examination of the origin and evolution of rodent-borne viruses; especially in the use of rodent phylogenies and genetic structure to predict the transmission and evolution of viruses. Modeling and predictions associated with epidemiology. Growth and utilization of natural history collections, especially those pertaining to mammals. Natural history and distribution of mammalian species.

CURRENT PROJECTS:
- Systematics of the genus *Peromyscus*.
- Systematics and phylogenetic studies of *Peromyscus boylii*.
- Phylogenetic relationships of Neotomine and Peromyscine rodents.
- Study of hybridization between chromosomal races of *Geomys*.
- Study of hybridization between two species of *Neotoma*.
- Systematics and phylogenetic studies of the genus *Sigmodon*.
- Systematics and phylogenetic studies of the genus *Neotoma*.
- Systematics and phylogenetic studies of the genus *Geomys*.
- Ecology of emerging hanta- and arenaviruses in the southwestern US.

Graduate students and their research:
- John Hanson (PhD student) is in his fourth year. Dissertation topic involves - Molecular systematics of Oryzomyines.

- Michelle Haynie (PhD student) is in her fifth year. Dissertation topic involves - Population genetics of four species of *Neotoma* using microsatellite data.

- Dnate' Baxter (Masters student) is in her third year. Thesis topic involves - Population genetics of *Neotoma micropus* collected from midden sites.

- Ryan Chambers (Masters student) is in his first year. Thesis topic is undecided at this time.

- Dallas Henson (Masters student) is in his first year. Thesis topic is undecided at this time.

Undergraduate students and their research:
- Nevin Durish (Senior) is in his fourth year with the Howard Hughes Medical Institute Program. Research topics involve - Molecular systematics of the *Peromyscus boylii* and *truei* groups, GIS based research on woodrats and arenaviruses, and others. Nevin will be beginning the MS program in my laboratory in January 2006.

- Andy Stallings (Senior) just joined the laboratory this summer. His research topic is undecided at this time.

- Robert Baker (Sophomore) just joined the laboratory this fall. His research topic is undecided at this time.

Additional information:
- Brian R. Amman (PhD student) graduated and is employed at the Center for Disease Control in Atlanta, GA. Dissertation topic was - Systematics of the *Peromyscus boylii* species group based on the nuclear gene sequences from the alcohol dehydrogenase locus.

- Francisca Mendez-Harclerode (PhD student) graduated and is a postdoctoral fellow at

the University of Texas Health Science Center in San Antonio. Dissertation topic was Populations genetics of *Neotoma micropus* and how geneology predicts susceptibility/resistance to arenavirus.

TRINITY UNIVERSITY
Department of Biology
One Trinity Place
San Antonio, TX 78212

David Ribble

FAX: 210-999-7229
EMAIL: dribble@trinity.edu
Web page URL: www.trinity.edu/dribble

Research Interests, Projects, and Grants: I am interested in the behavioral ecology of mammals, and work primarily with *Peromyscus* and most recently sengis or elephant-shrews (Macroscelidea). I spent July – December 2005 working with Dr. Victor Sánchez-Cordero of UNAM on the social behavior of *Neotomodon (Peromyscus) alstoni*. In the first part of 2006 I will be in Tanzania to direct a study abroad program for the Associated Colleges of the Midwest and to search for giant sengis (*Rhyncocyon*). In July and August 2006 I will then travel to South Africa to conduct a behavioral study on rock elephant-shrews (*Elephantulus myurus*). I will return to my day job at Trinity University in August 2006.

Undergraduate Students and Their Research: Samantha Hammer – The mating system of the Volcano mouse in Mexico (*Peromyscus alstoni*)

UNIVERSITY OF NORTH TEXAS
Department of Biological Sciences
PO Box 310559
Denton, TX 76203

Earl G. Zimmerman

PHONE: 940-565-3223
FAX: 940-565-4297
EMAIL: ezim@unt.edu
Web page URL: www.biology.unt.edu

Research Interests, Projects, and Grants:
Microsatellite DNA Variation in Black-tailed Prairie Dogs - Funded by

TPWD
Vegetation and Wildlife Habitat of the LBJ Grasslands of North-central Texas

Graduate Students and Their Research:
April English - MS candidate - Vegetation and Wildlife Habitat of the LBJ Grasslands of North-central Texas
Mercy McBrayer - MS candidate

Undergraduate Students and Their Research:
Anna Hofarth - Mammal Diversity in Restored Habitats in North-central Texas
Stephen Smith - Mammal Diversity of Restored Habitats in North-central Texas

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THE UNIVERSITY OF TEXAS AT AUSTIN

Texas Memorial Museum
2400 Trinity St
Austin, TX 79705

Pamela R. Owen

PHONE: 512-232-5511
FAX: 512-471-4794
EMAIL: powen@mail.utexas.edu
Web page URL:
Texas Memorial Museum: http://www.utexas.edu/tmm/
Digital Morphology: http://www.digimorph.org/about/pamelaowen.phtml

Research Interests, Projects, and Grants:
Evolutionary history of American badgers (Taxidiinae)
Morphology, evolution, and systematics of Carnivora
Late Cenozoic mammalian faunas
Natural science education and outreach

Additional Information:
I am currently serving as the Fossil Editor for *Mammalian Species*.

West Texas A&M University
Department of Life, Earth, and Environmental Sciences
Box 60808
Canyon, TX 79016

Raymond S. Matlack

PHONE: (806) 651-2583
FAX: (806) 651-2928
E-EMAIL: rmatlack@mail.wtamu.edu
Web page URL: http://www.wtamu.edu/~rmatlack/

Research Interests, Projects and Grants: I have been at WTAMU since fall of 2002 but have numerous research projects underway. My background and current research interests focus on the ecology of small mammals.

Our main research site is Cañoncita Ranch, a newly acquired portion of Palo Duro Canyon State Park. We have initiated a long-term study to determine the composition of the small mammal community, examine temporal and spatial variation in the small mammal community, and examine the influence of topography on small mammals. We are especially interested in the ecology of the Palo Duro mouse, a state threatened species that occurs only in the canyons of the Panhandle of Texas.

We are in the process of implementing a large-scale replicated study of the influence of burning on plants and vertebrates in shortgrass prairie. The study will be conducted at the Crossbar Ranch (managed by the Bureau of Land Management) and consists of 9 large experimental (average size of plot ~ 300 acres) plots with 3 plots receiving frequent fire, 3 plots receiving moderate fire frequency, and 3 plots serving as long-term unburned controls. We are sampling mammals, reptiles, amphibians, and birds in each of the plots to determine their response to fire and fire frequency.

Brenda E. Rodgers

PHONE: 806-651-2283
FAX: 806-651-2928
EMAIL: brodgers@mail.wtamu.edu

Research Interests, Projects and Grants: My research Program is currently funded by the U.S. Department of Energy's Low Dose Radiation Research Program (http://lowdose.tricity.wsu.edu/). In collaboration with the laboratories of Drs. Ron Chesser and Robert Baker (Texas Tech) and Dr. Jeffrey Wickliffe (UTMB) we are examining the effects of exposure to low doses of ionizing radiation at the cellular and molecular level.

In addition to the Chernobyl project, our laboratory is collaborating with Dr. Ray Matlack's small mammal research in Palo Duro Canyon. Our role in this project is karyotyping and tissue archival of the specimens collected.