

Pamela Madrid

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From: owner-exec@lternet.edu on behalf of Stapp, Paul [pstapp@Exchange.FULLERTON.EDU]
Sent: Friday, October 27, 2006 5:59 PM
To: exec@lternet.edu
Subject: [LTER-exec] ASM Meeting Follow-up Proposal

Attachments: Stapp 2006 LTER ASM Follow-up Meeting Proposal.pdf



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R ASM Follow-u

Dear Bob,

Attached please find my proposal for funds to support travel to follow-up meetings as a result of the activities of our Working Group at the LTER ASM meeting last month.

Please let me know if you have any questions about my request.

Thanks,

Paul

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LTET Network Office Proposal: Toward a synthesis of LTER studies of small mammal populations and communities in arid and semiarid ecosystems

Organizer: Paul Stapp (SGS-LTER), Department of Biological Science, California State University, Fullerton, CA 92834. Telephone: 714.278.2849; Email: pstapp@fullerton.edu

Background and Rationale: One of the central missions on the NSF Long-Term Ecological Research (LTER) program is to document the spatial and temporal distributions of populations that are representative of trophic structure. Small mammals (rabbits, rodents) are integral components of semiarid and arid systems because of their roles as consumers of plants, seeds and arthropods, as soil disturbance agents, and as food for predators. In the early-mid 1990's, investigators at three sites in the LTER network (Jornada, JRN; Sevilleta, SEV; Shortgrass Steppe, SGS) and one ILTER site (Mapimi, Mexico; MAP) established similar sampling procedures to monitor resident small mammal populations, with the following goals: 1) quantify spatial and temporal patterns of abundance and community composition of small mammals among representative shrub and grassland vegetation types; 2) provide baseline information to aid future consumer and ecosystem-level studies at each of the sites; and 3) establish long-term databases that could be used in comparative studies of the dynamics of small mammal populations among other sites in the LTER network and elsewhere. Complementary data on weather, primary production, vegetation structure, food resources and predator populations were also collected at most of the sites to identify possible abiotic and biotic factors that drive long-term patterns in small mammal communities.

In September 2006, the lead PIs on these 4 small mammal monitoring projects met at the LTER All-Scientists Meeting to share our results thus far, discuss common patterns and problems, plan for cross-site analyses of our results and discuss future opportunities for related work across these and other LTER sites. At least 18 scientists and students from across the network participated in our Working Group. All of the main participants agreed that another longer, more focused meeting would be necessary for us to flesh out patterns in the long-term data sets that had been collected in the same way across sites (trapping webs for rodents; spotlight counts for rabbits). Although some results have or are being published at the sites individually, to date there has not been any attempt to investigate patterns across the 4 sites collectively, which span 14° of latitude and gradients in climate, productivity and other environmental factors. In particular, we identified a number of important questions that we could address with these data sets, including:

- How do extreme climatic events such as droughts and ENSO events influence the composition and dynamics of small mammal communities? Is there evidence of regime shifts and thresholds in small mammal community patterns that might reflect these broader climatic changes?
- How do the effects of grazing and other land-use disturbances differ across grasslands and shrublands as one moves from semiarid to arid systems?
- How does the relative importance of spatial heterogeneity in vegetation structure, especially the role of shrubs, for small mammal populations differ across sites?
- What factors contribute to the replacement of rodent granivores by omnivores as one moves northward from arid to semiarid sites? How does the role of small mammals as consumers change?

We also discussed a new initiative to develop a cross-site research proposal to investigate more broadly the role of animals as consumers and disturbance agents in arid and semiarid systems, which could include other sites and investigators. We decided that this activity would require a separate meeting and that it would be most productive to first complete analysis and synthesis of the existing long-term data from the 4 core sites to generate and prioritize hypotheses for new research.

Proposed activities: We propose two meetings in 2007 to follow up on our successful Working Group at the LTER All-Scientist's Meeting:

1) A meeting for 3 days at the SEV site in February or March 2007 to discuss site-specific results, identify patterns in common at the sites, generate new analyses to be conducted at the meeting and begin writing a manuscript (tentatively for *Bioscience*) on these cross-site results. We request travel and lodging funds for 8 participants:

Paul Stapp	SGS	pstapp@fullerton.edu
Brandon Bestelmeyer	JRN	bbestel@nmsu.edu
Andrea Campanella	JRN	acampane@nmsu.edu
Lucina Hernandez	Mapimi (ILTER)	lucina@fauna.edu.mx
David Lightfoot	SEV/JRN	dlightfo@unm.edu
Mike Friggens	SEV	friggens@sevilleta.unm.edu
Bob Parmenter	SEV/VCNP	bparmenter@vallescaldera.gov

We also hope to identify a statistical modeler with expertise in time-series analysis who can help us to troubleshoot and facilitate group data analysis at the meeting. The lead PI at each site will be responsible for bringing data in a common format to the meeting.

2) A meeting for 3 days at the SEV site in September 2007 to brainstorm ideas and begin plans for a grant proposal, including writing assignments, to be submitted in early 2008. In addition to the seven researchers listed above, we anticipate inviting another 3-4 scientists working in other semiarid and arid ecosystems (e.g., other North American deserts, shrubsteppe and prairie habitats).

Outcomes:

1. Stapp has organized a symposium for the Annual Meeting of the American Society of Mammalogists (ASM), which will be held in Albuquerque, NM, in June 2007. This symposium, entitled "Long-term studies of small mammal communities in arid and semiarid ecosystems: synthesis and prognosis" will include presentations by researchers studying small mammal communities in arid and semiarid across four continents, with travel funding from ASM. Stapp will give a presentation on the collective work of LTER projects, including results from the activities at the first meeting.

2. We expect to produce at least one synthetic manuscript (tentatively targeted to *Bioscience* or *Frontiers in Ecology and the Environment*) that summarizes key results from the long-term sampling projects underway across the four sites. This would be expected to be completed and submitted in summer 2007.

3. At the second meeting, we intend to build upon the outcome of the first meeting to develop a grant proposal, tentatively targeted to NSF, for new multi-investigator, cross-site research project at the second meeting. The target date for submission would be early 2008.

Budget and Budget Justification

Meeting 1: February/March 2007

Airfare and ground transport:

Stapp (Ontario, CA to Albuquerque, NM)	\$ 400
Hernandez (Durango, Mexico to Albuquerque, MN)	\$ 700
Ground travel from JRN (300 mi RT @ 0.70/mi)	\$ 210
Local travel (Albuquerque; 200 mi RT @ 0.70/mi)	\$ 140

Lodging at SEV:

8 persons for 3 nights @ \$30 per night per person plus linen fee \$15 (\$105 per person)	\$ 840
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Use of SEV Conference Room:

\$40 per day	\$ 120
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Meals:

8 persons for 4 days @ \$30 per day per person	\$ 960
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Total for Meeting 1: **\$3370**

Meeting 2: September 2007

Same as above \$3370

Plus an additional for travel, lodging and meals for 3 additional researchers:

Airfare plus shuttle (\$400 per person; estimated)	\$1200
Lodging (\$105 per person)	\$ 315
Meals (\$120 per person)	\$ 360

Total for Meeting 2: **\$5245**

TOTAL REQUEST: **\$8615**

If funds for both meetings are not available, we would accept support for the first meeting alone (\$3370), which is the highest priority.