

Graduate Student Committee Annual Report April 17, 2002

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Co-chairs

Since the last Co-ordinating Committee meeting, held in Tempe, we have successfully created an *Official Guide for Graduate Student Site Representatives in the USA LTER Network*. This manual contains information for graduate student site representatives including: benefits of being associated with the LTER Network; the organizational structure of the LTER Network; the mission statement of the LTER Graduate Committee; responsibilities of site representatives; web-based information available to graduate students; instructions for maintaining the LTER graduate student listserv; instructions for updating individual student profiles on the LTER website; a calendar of events for graduate students; research and funding opportunities for graduate students; and, contact information. This manual also served as the basis for the generation of an online website which provides similar information (<http://www.sc.edu/~lter-usc>). This manual was distributed to graduate student site representatives at the ESA conference in Madison, WI held in August, 2001.

At the Madison 2001 ESA conference, we held a 2-hr meeting for graduate student site representatives. This meeting/social was also open to any students interested in finding out more information about the LTER network, and graduate student opportunities within the network. We had an overall attendance of 31 people, with graduate student representatives from 13 sites (AND, BES, BNZ, CAP, CWT, FCE, HFR, KBS, KNZ, LUQ, PIE, SGS, VCR). In addition, we had 4 attendees not currently affiliated with the LTER who were there to seek additional information about student opportunities within the network. During the meeting, we briefly introduced the co-chairs and site representatives, opened the table for general discussion of LTER network graduate student issues, followed by small discussion groups which were asked to form based on areas of common interest to answer 3 questions of importance to the committee. Feedback from the small group discussion was instrumental in helping the committee reformulate our *Vision Statement* and generate an *Education Statement*. These have been attached to this report.

In the upcoming year we have planned another meeting/social event at the 2002 ESA meeting in Tucson, AZ this August. We also hope to improve the network database to make maintenance of a list of current graduate students more efficient. Communication between the LTER grad site representatives and their site data managers seems to be weak, at best. We hope that by 2003 all graduate students currently associated with the LTER will have gone onto the network web site and updated all personal information regarding their research interests. Jennifer Edmonds will be graduating this coming year, so the committee would like to search for a replacement. It is our belief that staggered 2-year terms is best for the co-chair positions, to ensure continuity of leadership over long periods. At the Co-ordinating Committee meeting in Seville we would like to solicit potential candidates for her position and then have a final decision made by the August ESA meeting in Tucson.

Graduate Student Committee Vision Statement

The following is a statement of our vision for the next 10 years of LTER national activity as it related to the arena of graduate student life.

Standardization of the Quality of Mentoring at LTER Sites

A carefully worded statement on the state of graduate training in the LTER network has been drafted posted on the web. The goals outlined in this document should be discussed and considered by all LTER-related faculty and the lead principle investigator at each LTER site should evaluate their site's mentoring, commitment to breadth of graduate education training, and effort to encourage activities that bring graduate students together to discuss issues related to their intellectual development as scientists. Our vision is that in 10 years each site will be conducting at least one half-day workshop a year on the following three topics, (1) techniques for completing collaborative and interdisciplinary research, (2) how to train for a job as an effective teacher in higher education (3) approaches used in being an effective mentor

Central Organization and Continuity

We have found that many of the LTER sites do not have an efficient protocol for updating their site personnel database, or for encouraging the current researchers at the site (including graduate students) to add themselves to the national LTER database. If web information as well as internal site information is inaccurate, important electronic information from the network cannot be distributed effectively. Additionally, the formation of a searchable network database that would serve to link researchers with common scientific interests or advertise job opportunities will fail without good information as to who is currently working in the network. Our vision is that in 10 years (1) every LTER associated graduate student will be encouraged by the faculty to add themselves to the network database through the interactive web page maintained by the network, (2) that each site will have its own internal listserve created by the data manager and grad site representative that consists of all current graduate students working at the site for ease in information dissemination, (3) that the network database will include information about expected graduation dates of all students so that students can be automatically purged from the system, and (4) that the network will maintain a searchable database of students to facilitate cross-site research and for finding job opportunities within the network.

Student Cross-site Research Opportunities

LTER offers the opportunity to train graduate students across disciplines and ecosystems. Our vision is that in 10 years (1) the annual ESA meeting will have at least one workshop, for LTER graduate students and organized by LTER graduate students, that focuses on a specific research topic as it relates to a cross-site research project (proposed or currently ongoing), (2) at least one of the travel grant proposals submitted to the LTER network for funding for travel to discuss cross-site research will be co-authored by graduate students from at least 2 LTER sites.

CURRENT STATUS OF GRADUATE TRAINING IN THE LTER NETWORK

Robert Daoust and Jennifer Edmonds, *LTER Graduate Student Co-chairs, March 13, 2002*

The diversity of the LTER network can be viewed by the range of ecological systems studied, the variety of institutions associated with the network, as well as the various approaches that these institutions take in graduate education, training, and research involvement. To exemplify this, some LTER-funded institutions have no graduate program located on site at all (PIE, ARC), while others have large robust graduate student components (NTL, CAP, KNZ, FCE, etc.). This diversity plays through to the experiences that graduate students at each of the various LTER sites and institutions are afforded. Part of the LTER network's charge is to synthesize and co-ordinate research activities, as well as ensuring a parity of research standards, across all research sites. Just as there is a diversity of faculty research interests, there is a diversity of career goals for the graduate students. When preparing students for jobs, we need to consider both academic and private sector opportunities. Within academic institutions, the emphasis on research vs. teaching varies greatly. Students should have the opportunity to explore issue related to all of these careers, with the recognition that every student will not need or desire training in every area.

The disparity between graduate student experiences and education among the various LTER sites should be addressed. The LTER network has the ability to provide educational opportunities to students across all participating sites and institutions that will enhance the overall quality of graduating students of the network as a whole. As an overarching national organization it has the potential to bridge these gaps between students through a number of mechanisms. Such a role could be undertaken by using the three tenets of academic faculty activity – research, teaching, and service – as a guideline for generating workshop/seminar sessions open to students from across the network, and drawing upon current faculty members with expertise in each area from within the network as mentors/leaders of these workshops. Regardless of graduate level, most faculty take a traditional approach to graduate education by focusing on the mechanics of academic research, while downplaying the importance of both teaching and service. Undoubtedly, this arises from the necessity of graduate student participation for the success of academic research projects. Aspects of teaching are most often dismissed to very limited experience gained hands-on when graduate students are required to serve as teaching assistants. In the natural sciences, teaching a lab only provides a minimal comfort level with interacting with students, and provides no training in syllabus development, lecturing, test development, etc. Little to no emphasis or instruction is given on service aspects of faculty appointments.

In considering its potential as national organization in providing enhancements to affiliated graduate students,

the LTER network would do well to account for these discrepancies in graduate training on a whole. We suggest that workshops could be designed either for graduate students as whole, for Master's level students, and for Doctoral level students. Suggestions would include topic areas such as *grantsmanship*, preparing *teaching statements* for academic position interviews, aspects of conducting *collaborative/interdisciplinary/integrated* research, working with *organizations outside of academic institutions*, and successful skills for *presentations*. These are but a few suggests. Others could certainly be generated. Clearly, even these few suggested workshop sessions would extend the current scope of graduate training providing opportunities for graduate students from across the LTER network to learn more about research, teaching, and service. The LTER network is currently able to claim as participants some of the best ecologists and academic/research institutions in the nation. It only follows that it should also be able to boast that students associated with its program are some of the best trained in the country.