Texas A&M University
College of Agriculture and Life Sciences
Department of Ecosystem Science and Management

April 20, 2010

TO: Dr. David Wm. Reed
    Chair, Graduate Council

Through: Dr. David Wm. Reed
        Chair, Graduate Program Council
        College of Agriculture and Life Sciences

From: Dr. Steve Whisenant
      Head

The Department of Ecosystem Science and Management, in cooperation with the College of Agricultural and Environmental Sciences at Tarleton State University (TSU), has developed a Proposal for a Cooperative Doctoral Program, 2A - Joint Doctoral Program in Rangeland Ecology and Management. We are herewith submitting it to the Graduate Council for approval. Attached is the proposal along with supporting documents including (1) estimated cost and funding, (2) CVs of TSU's teaching faculty, and (3) CVs of TSU's research faculty. Please let me know if additional information is needed.
Proposal for a Cooperative Doctoral Program, 2A - Joint Doctoral Program in Rangeland Ecology and Management

between
Texas A&M University, College of Agriculture and Life Sciences, Department of Ecosystem Science and Management
and
Tarleton State University, College of Agricultural and Environmental Sciences

EXECUTIVE SUMMARY

Texas A&M University (TAMU) and Tarleton State University (TSU) are requesting approval for a Cooperative Doctoral Program, 2A - Joint Doctoral Program in Rangeland Ecology and Management. This program is designed to enhance TSU’s capacity and the institutional linkage between TAMU and TSU in training graduate students in Rangeland Ecology and Management. The degree that will be granted will be a Doctor of Philosophy (Ph.D.) degree.

The joint doctoral program will essentially represent an extension of the existing Rangeland Ecology and Management Ph.D. program at TAMU. The joint program at TSU, a member of the TAMU System, will be closely integrated with its partner program in the TAMU Department of Ecosystem Science and Management. Students in the joint program will take the majority of their coursework, particularly during the program’s initial years, at TAMU-College Station. Initially, the required graduate courses will all be taught by TAMU faculty on the TAMU campus with the exception that TSU faculty may teach previously approved master’s level courses.

A Program Coordinating Committee consisting of faculty representatives from each institution will function as a joint admissions advisory committee and will, with appropriate input from the degree candidates and the prospective graduate committee chairmen, designate members of the graduate committees. One-half or more of the members of each graduate committee will be TAMU faculty.

With respect to program admission and residency requirements, the required program of study, comprehensive examinations, admission to candidacy, and a substantive dissertation, the joint doctoral program will mirror TAMU’s program for its other Rangeland Ecology and Management Ph.D. students. The joint program will be a conventional, full-time residential program requiring 96 hours of coursework beyond the bachelor’s degree or 64 hours beyond the master’s degree. Students may satisfy residency requirements on either campus. TSU’s research contributions to the total program efforts will be focused on natural resources management issues. Joint program degree candidates at TSU will have access to the same laboratory research equipment and support services at TAMU as other Rangeland Ecology and Management Ph.D. candidates.
PROPOSAL

Texas A&M University (TAMU) and Tarleton State University (TSU) are requesting approval for a Cooperative Doctoral Program, 2A - Joint Doctoral Program in Rangeland Ecology and Management. The degree that will be granted will be a Doctor of Philosophy (Ph.D.) degree.

I. Program Administration
   A. The Cooperative Doctoral Program, 2A - Joint Doctoral Program in Rangeland Ecology and Management will be administered through the Department of Ecosystem Science and Management (ESSM) in the College of Agriculture and Life Sciences at Texas A&M University. The Coordinator for the Doctoral Program in Rangeland Ecology and Management will serve as primary administrator and will be a member of the TAMU faculty. Additionally, the Coordinator will serve as chair of the Program Coordinating Committee. The Coordinating Committee composed of two representatives from each institution and appointed by their respective deans will oversee the program implementation. The existing graduate admission review process and criteria in the ESSM department will apply to this program. With input from the candidate and the prospective graduate committee chairman, graduate committee members will be designated by the Coordinating Committee in concurrence with the TAMU's policy for the Ph.D. Advisory Committee. The doctoral studies coursework undertaken by each degree candidate will be determined by the candidate's graduate committee with input from the candidate. Likewise, student advisement will be primarily accomplished through the candidate's graduate committee. It will be the responsibility of the Coordinating Committee to insure that the joint program at Tarleton is kept well-integrated with its partner program at TAMU.
   B. A Texas A&M faculty member and a Tarleton faculty member will co-chair each Ph.D. candidate's graduate committee, and one-half or more of the committee members will be Texas A&M faculty. Initially, the required graduate courses will all be taught by Texas A&M faculty on the Texas A&M campus with the exception that Tarleton faculty may teach previously approved master's level courses. Limited numbers of Ph.D.-level courses in the major may be authorized by the Texas Higher Education Coordinating Board (THECB) for teaching by Tarleton faculty. Students should initially plan on spending a minimum of one calendar year in residence at College Station to have access to certain required coursework.

II. Program Description
   A. Admission and Degree Requirements
      The joint doctoral program will mirror Texas A&M's program for its other Rangeland Ecology and Management Ph.D. students, including program admission and residency requirements, the required program of study, comprehensive examinations, admission to candidacy, and the dissertation. The Program Coordinating Committee referenced in section IA will screen applications and recommend candidates to the ESSM Graduate Programs Committee for further review and final admission decisions. The joint program will be a conventional, full-time residential program, requiring 96 hours of coursework beyond the bachelor's degree or 64 hours beyond the master's degree. Each degree candidate will be required to satisfactorily complete
B. Curriculum and Research Focus

As indicated in Item 1A, each degree candidate’s program of coursework will be determined by his or her graduate committee with appropriate consultation with the candidate. Curricula undertaken by the degree candidates, therefore, can be expected to vary widely, including appropriate coursework in natural resources management fields of study. However, several core courses are required for all students enrolled in this program. These courses include graduate seminars, research methodology/process, and one graduate-level statistics course (Statistics in Research).

While Texas A&M’s Ph.D. program in Rangeland Ecology and Management is sufficiently broad to include a wide array of agricultural/environmental studies, Tarleton’s contribution to the program efforts will be focused on natural resources management issues. Tarleton’s participation in the joint program will be coordinated through and housed in its College of Agricultural and Environmental Sciences. The program will also include faculty expertise in support areas such as biology, biochemistry, environmental engineering, and hydrology at Tarleton and the participation of Texas AgriLife Research scientists at the Texas A&M System AgriLife Research and Extension Center at Stephenville.

III. Program Need and Demand

Numerous career opportunities exist each year throughout the United States for university graduates at all levels that have strong dual academic backgrounds in agricultural and environmental sciences. With the continuing need for more efficient, sustainable food production systems, the rapidly-expanding national interest in the proper care and management of our vast natural resources, and the need to comply with environmental laws and regulations that are increasing in complexity, the demand for these graduates is expected to increase dramatically each year for the foreseeable future (U.S. Department of Labor Bureau of Labor Statistics Occupational Outlook Handbook, Bulletin 2700, 2008-2009 Edition).

Potential employers include various federal agencies such as the Natural Resources Conservation Service, Environmental Protection Agency, U.S. Army Corps of Engineers, and the U.S. Fish and Wildlife Service; state agencies such as the Texas Commission on Environmental Quality, Texas Water Development Board, and Texas AgriLife Research and Extension; public and private universities; private energy, land and water resource planning and environmental consulting firms, and private conservation organizations such as The Nature Conservancy.

The nation’s major resource management agencies are all projected to experience significant loss of personnel in the next decade due to the retirement of individuals hired
in the 60's and 70's (Trends in Early Careers of Life Scientists. National Academy Press. 1998).


- There are about 83,000 environmental scientists in the United States, not including those who are faculty members in colleges and universities (classed as Post-Secondary Teachers). Of these, 43% are employed by federal, state, or local governments and another 21% are engaged in management, scientific, or technical consulting services.

- Employment of environmental scientists in the U.S. is expected to grow much faster between 2006 and 2016 than the average for all occupations, with a 25% growth rate. About 21,000 new positions are expected during this period, not including those resulting from retirements and other normal turnover. Job growth in environmental science will be spurred largely by increasing demands placed on the environment, including water resources, and by population growth. Further demand should result from the need to comply with complex environmental laws and regulations relating to ground water contamination, air pollution, and flood control. Much job growth will also result from a continued general awareness regarding the need to monitor the quality of the environment, to interpret the impact of human actions on terrestrial and aquatic ecosystems, and to develop strategies for restoring ecosystems. In addition, environmental scientists will be needed to help planners develop and construct utilities that protect water resources and reflect efficient and beneficial land use.

- Environmental scientist job growth in the 2006-2016 decade should be strongest in private sector consulting firms. Changes in the nature of environmental consulting coupled with new federal and state initiatives will result in a greater focus on waste minimization, resource recovery, pollution prevention, and the consideration of environmental effects during product development. This shift in focus to preventive management will provide many new opportunities for environmental scientists in consulting roles.

With the population trend of Texas, a substantial increase in the enrollment in higher education institutions is anticipated and the “Closing the Gaps by 2015” specifies the goal of closing the gaps in participation to enroll 630,000 more students by 2015 (THECB). This effort requires substantial growth in the production of new faculty in higher education institutions. This proposed joint program is well positioned to contribute to the production of future faculty in Texas and elsewhere.

The research focuses of the dissertation studies for the PhD-RLEM graduates are diverse — the ecology and management of rangelands (deserts, grasslands, savannas, woodlands,
and wetlands) in many different aspects (biogeochemistry, population/community dynamics, ecosystem processes, landscape ecology, ecohydrology, ecological restoration, systematic, management, human dimensions, etc.) The nature of the jobs they were hired into after graduation, as largely influenced by their expertise associated with their dissertation studies, is also quite diverse. Most of the PhD graduates took positions in universities (postdocs or faculty members), research institutions, and government/international agencies. Over the past 4-5 years, employers of Texas A&M University Ph.D. graduates in Rangeland Ecology and Management have included Baylor University, Oregon State University, Texas A&M University, Texas AgriLife Research, University of Arizona, University of California-Davis, University of Nebraska, University of Tennessee at Martin, University of Wisconsin–Madison, University of Wyoming, University of Puerto Rico, U.S. Department of Agriculture, Chinese Academy of Sciences, Instituto Politecnico de Braganca, Korea Environment Institute, Scientific & Technological Research Council of Turkey (TUBITAK), Cranfield University of UK, and University of Fort Hare, South Africa. There has been a 100% placement rate in recent years for the TAMU PhD-RLEM graduates. For the last three years, 29% of our Ph.D. graduates were employed in academia, 43% as post-doctorates, 14% in government, and 14% in industry/professional.

The fact that Texas A&M’s Ph.D. program in Rangeland Ecology and Management, with 26 students enrolled in Fall 2009, is able to admit less than half of the well-qualified applicants indicates the strong demand for the program. The department admits only applicants for whom a graduate assistantship or fellowship is available. This is the primary reason the department has to turn away many qualified applicants.

The Department of Ecosystem Science and Management (ESSM) at Texas A&M, where the Ph.D. program in Rangeland Ecology and Management resides, has also been making significant efforts in improving the cultural diversity of its graduate student body (Figure 1). In the last four years, ESSM has acquired three USDA grants in collaboration with minority serving institutions (University of Texas-San Antonio, Southern University, and University of Puerto Rico), as well as a grant from the TAMU Minority Recruitment and Retention Leadership Team, to recruit minority graduate students. The Department currently has two additional USDA grant proposals, in collaboration with University of Texas-San Antonio, University of Texas-Pan American, and Texas A&M International University, focused on minority graduate student recruitment submitted and under review. The Department has recruited 17 (13 PhD and 4 MS) minority graduate students in the last four years and all of them have received one or more graduate fellowships. The Department has also established the Sloan Minority PhD Program in ESSM in 2007 funded by the Sloan Foundation and has recruited 10 Sloan Fellows, and has been collaborating closely with the Hispanic Leaders in Agriculture and the Environment Fellowship Program. There has been an increasing enrollment of female students in the Rangeland Ecology and Management Ph.D. program and more than half of the program’s students are now female. These changing demographics and the continuing efforts of the program in recruitment and mentoring will help the proposed joint Ph.D. Program to recruit students from underrepresented populations to participate in the agricultural and
environmental fields and contribute to the diversity of future workforce in academia, government agencies, and private sectors.

![Graph showing trends in demographics of ESSM graduate students.]

Figure 1. Trends in the demographics of ESSM graduate students.

In addition to the Rangeland Ecology and Management Ph.D. programs at Texas A&M University, Texas Tech University (275 miles from Tarleton) has a Range Science PhD program which is a considerably smaller program with four faculty members. The proposed joint program will obviously be patterned after the existing program at Texas A&M. There is limited overlap between the focus of this proposed program and those of the range programs in Texas Tech University and there appears to be more than sufficient demand for all of these programs.

IV. Personnel:
The combined faculty of the proposed joint program, as shown in Tables 1 and 2, represents outstanding scholarly expertise and interests. Over 80% of the RLEM core faculty at TAMU received external grants during the past three years, and on average they published 2.71 refereed papers per faculty per year. Each faculty member listed is qualified to serve as a member of a Ph.D. committee and/or teach a graduate course. In addition, PhD students in RLEM have access to and routinely do have faculty members with specific expertise in other departments and colleges on the TAMU-College Station campus.

Due largely to the increasing quality of its faculty (see appendix for vitae) and staff, Tarleton’s commitment to applied and basic research continues to develop. The number and dollar amounts of sponsored research grants at Tarleton have increased significantly. The university has a well-known state institute, the Texas Institute for Applied Environmental Research (TIAER), pursuing a national leadership role in environmental research, and a nationally known Center for Agribusiness Excellence (CAE) receiving significant federal grants for research and development of data warehousing, data mining systems.

In FY2006, Tarleton ranked 15th of 39 Texas universities in expenditures for research and development. Of all Texas universities, Tarleton ranked 3rd in food, fiber and agricultural production research and fifth in agricultural sciences research. Of the ten institutions in the Texas A&M University system, Tarleton ranked second in state funded research and development and fourth in federally funded research and development. With almost $26,000
of federal R&D expenditures per faculty member, Tarleton ranked 5th in the Texas A&M University System and 13th among all Texas public universities.

Tarleton sponsored funding for the period FY 1994 to FY2007 is illustrated in Figure 2. The Center for Agribusiness Excellence ($4,248,433) and the Texas Institute for Applied Environmental Research ($398,002) were major recipients of federal funding in FY2007. The Texas Institute for Applied Environmental Research (TIAER) also received $2,653,839 of state funding.

![Bar chart showing sponsored funding for FY94 to FY06](image)

**Figure 2.** Tarleton sponsored funding for the period of FY 1994 to FY2007.

The existing faculty members listed in Tables 1 and 2 will serve as a major resource in the development and implementation of the joint doctoral program. Being a part of the Texas A&M University System has helped Tarleton attract premier faculty from across the nation. It is planned and expected that additional faculty positions will be budgeted over the next three years (See Item VI). Along with substantial increases in graduate research assistantships and other research funding from state, federal, and private sources, additional outstanding new faculty can be recruited to the program. Tarleton faculty members who meet the qualification for Graduate Faculty status at TAMU based on the guidelines of the College of Agriculture and Life Sciences, will be added to TAMU Graduate Faculty in ESSM or other appropriate departments of COALS based on their area of research.

Having the joint doctoral program at Tarleton will further enhance the academic stature and visibility of the University and thereby provide a valuable marketing tool for attracting first-rate faculty and students in undergraduate and graduate program areas across the university. Numerous prospective students will recognize the advantages of earning their degree at a university where a Ph.D. degree is offered. The joint program should particularly boost enrollment in Tarleton's Master of Science program in Environmental Science.

Recruitment of the additional faculty required for the joint doctoral program will result in a broader repertoire of quality experiences and perspectives to be shared with enrolled
students. The results of research conducted by the joint program faculty, as well as by students in their dissertation studies, will have a positive impact on the entire institution as they are shared with colleagues and implemented. The increased level of scholarly discourse and activity required of those engaged in Tarleton’s first Ph.D. program will elevate the level of expectation for all university faculty and students.
Table 1. Texas A&M University Core and Support Faculty for the Joint Doctoral Program in Rangeland Ecology And Management.

<table>
<thead>
<tr>
<th>Faculty</th>
<th>Degree, Year/University</th>
<th>Current Position</th>
<th>Area(s) of Expertise</th>
</tr>
</thead>
<tbody>
<tr>
<td>Angerer, Jay</td>
<td>Ph.D., 2008/TAMU</td>
<td>Assistant Professor</td>
<td>Agroecological Modeling</td>
</tr>
<tr>
<td>Ansley, James</td>
<td>Ph.D., 1983/University of Wyoming</td>
<td>Professor</td>
<td>Rangeland Ecology / Woody Plant Management</td>
</tr>
<tr>
<td>Armitage, Anna</td>
<td>Ph.D., 2003/UCLA</td>
<td>Assistant Professor</td>
<td>Coastal and Wetlands Ecology</td>
</tr>
<tr>
<td>Boutton, Thomas</td>
<td>Ph.D., 1979/Brigham Young University</td>
<td>Regents Professor</td>
<td>Biogeochemistry, Soil Ecology</td>
</tr>
<tr>
<td>Briske, David</td>
<td>Ph.D., 1978/Colorado St. University</td>
<td>Professor</td>
<td>Rangeland Ecology</td>
</tr>
<tr>
<td>Burton, Diana</td>
<td>Ph.D., 1991/University of California, Berkeley</td>
<td>Associate Professor</td>
<td>Economics and Policy</td>
</tr>
<tr>
<td>Cadenhead, James</td>
<td>M.S., 1975/TAMU</td>
<td>Assistant Professor &amp; Extension Range Specialist</td>
<td>Range and Brush Control</td>
</tr>
<tr>
<td>Conner, Richard</td>
<td>Ph.D., 1970/TAMU</td>
<td>Professor</td>
<td>Management/Range/Production Economics</td>
</tr>
<tr>
<td>Eriksson, Marian</td>
<td>Ph.D., 1988/University of Minnesota</td>
<td>Associate Professor</td>
<td>Statistics/Biometrics</td>
</tr>
<tr>
<td>Feagin, Rusty</td>
<td>Ph.D., 2003/TAMU</td>
<td>Associate Professor</td>
<td>Geographical Information Systems</td>
</tr>
<tr>
<td>Forbes, David</td>
<td>Ph.D., 1982/Edinburgh University</td>
<td>Associate Professor</td>
<td>Range Animal Nutrition</td>
</tr>
<tr>
<td>Fox, William</td>
<td>Ph.D., 1999/TAMU</td>
<td>Assistant Professor</td>
<td>Rangeland Restoration / Ecology</td>
</tr>
<tr>
<td>Gan, Jianbang</td>
<td>Ph.D., 1990/ Iowa State University</td>
<td>Professor</td>
<td>Forest Management and Economics</td>
</tr>
<tr>
<td>Gould, Jean</td>
<td>Ph.D., 1981/University of California, Riverside</td>
<td>Associate Professor</td>
<td>Biotechnology and Physiology, Genetic Transformation</td>
</tr>
<tr>
<td>Hamilton, Wayne</td>
<td>MBA, 1976/Sul Ross State University</td>
<td>Senior Lecturer</td>
<td>Brush Control and Ranch Management</td>
</tr>
<tr>
<td>Faculty</td>
<td>Degree, Year/University</td>
<td>Current Position</td>
<td>Area(s) of Expertise</td>
</tr>
<tr>
<td>-------------------------</td>
<td>---------------------------------</td>
<td>----------------------------------</td>
<td>-------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Hanselka, Wayne</td>
<td>Ph.D., 1973/TAMU</td>
<td>Professor &amp; Extension</td>
<td>Total Range Resource Management</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Range Specialist</td>
<td></td>
</tr>
<tr>
<td>Hart, Charles</td>
<td>Ph.D., 1992/New Mexico State</td>
<td>Professor</td>
<td>Rangeland Improvements</td>
</tr>
<tr>
<td></td>
<td>University</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hatch, Stephan</td>
<td>Ph.D., 1975/TAMU</td>
<td>Professor</td>
<td>Plant Biosystematics</td>
</tr>
<tr>
<td>Knight, Robert</td>
<td>Ph.D., 1980/TAMU</td>
<td>Associate Professor</td>
<td>Watershed Management</td>
</tr>
<tr>
<td>Kothmann, Mort</td>
<td>Ph.D., 1968/TAMU</td>
<td>Professor</td>
<td>Range Management Systems</td>
</tr>
<tr>
<td>Kreuter, Urs</td>
<td>Ph.D., 1992/Utah St. Univ.</td>
<td>Associate Professor</td>
<td>Human Dimensions and Socio-Economics of Rangeland</td>
</tr>
<tr>
<td>Krutovsky, Konstantin</td>
<td>Ph.D., 1984/Russian Academy of</td>
<td>Associate Professor</td>
<td>Plant Genomics, Population Genetics, Conservation Genetics</td>
</tr>
<tr>
<td></td>
<td>Sciences</td>
<td></td>
<td>Information Technology &amp; Geographic Information Systems (GIS)</td>
</tr>
<tr>
<td>Loh, Douglas</td>
<td>Ph.D., 1984/TAMU</td>
<td>Associate Professor</td>
<td>Biotechnology</td>
</tr>
<tr>
<td>Loopstra, Carol</td>
<td>Ph.D., 1992/North Carolina State</td>
<td>Associate Professor</td>
<td></td>
</tr>
<tr>
<td>Lyons, Robert</td>
<td>Ph.D., 1990/TAMU</td>
<td>Professor &amp; Extension</td>
<td>Integrated Brush Control</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Range Specialist</td>
<td></td>
</tr>
<tr>
<td>McGinty, Allan</td>
<td>Ph.D., 1979/TAMU</td>
<td>Professor &amp; Extension</td>
<td>Rangeland Management</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Range Specialist</td>
<td></td>
</tr>
<tr>
<td>Mohanty, Binayak</td>
<td>Ph.D., 1992/Iowa St. Univ.</td>
<td>Associate Professor</td>
<td>Vadose Zone Hydrology</td>
</tr>
<tr>
<td>Moore, Georgianne</td>
<td>Ph.D., 2003/Oregon St. Univ.</td>
<td>Assistant Professor</td>
<td>Ecohydrology</td>
</tr>
<tr>
<td>Pinchak, William</td>
<td>Ph.D., 1983/Univ. of Wyoming</td>
<td>Professor</td>
<td>Range Animal Nutrition</td>
</tr>
<tr>
<td>Popescu, Sorin</td>
<td>Ph.D., 2002/Virginia Tech</td>
<td>Associate Professor</td>
<td>Remote Sensing</td>
</tr>
<tr>
<td>Rogers, William</td>
<td>Ph.D., 1998/Kansas St. Univ.</td>
<td>Associate Professor</td>
<td>Ecological Restoration and Invasive Species</td>
</tr>
<tr>
<td>Shaw, Robert</td>
<td>Ph.D., 1979/TAMU</td>
<td>Professor</td>
<td>Agroecology / Resource Management</td>
</tr>
<tr>
<td>Smeins, Fred</td>
<td>Ph.D., 1967/Univ. of Saskatchewan</td>
<td>Professor</td>
<td>Plant &amp; Range Ecology</td>
</tr>
<tr>
<td>Faculty</td>
<td>Degree, Year/University</td>
<td>Current Position</td>
<td>Area(s) of Expertise</td>
</tr>
<tr>
<td>----------------------</td>
<td>-------------------------</td>
<td>--------------------------</td>
<td>----------------------------------------------------------</td>
</tr>
<tr>
<td>Srinivasan, Raghavan</td>
<td>Ph.D., 1992/Purdue University</td>
<td>Professor</td>
<td>Hydrology / Water Quality and Spatial Sciences Modeling</td>
</tr>
<tr>
<td>Taylor, Charles</td>
<td>Ph.D., 1983/TAMU</td>
<td>Professor</td>
<td>Grazing Management / Fire Ecology</td>
</tr>
<tr>
<td>Teague, Richard</td>
<td>Ph.D., 1987/University of Witwatersrand</td>
<td>Professor</td>
<td>Sustainable management / Ecological restoration / Ecological economics modeling</td>
</tr>
<tr>
<td>Tjoelker, Mark</td>
<td>Ph.D., 1997/University of Minnesota</td>
<td>Associate Professor</td>
<td>Global Change Ecology</td>
</tr>
<tr>
<td>Walker, John</td>
<td>Ph.D., 1988/TAMU</td>
<td>Professor</td>
<td>Range Herbivore Ecology</td>
</tr>
<tr>
<td>Washington-Allen, Robert</td>
<td>Ph.D., 2003/Washington State University</td>
<td>Assistant Professor</td>
<td>Environmental Modeling &amp; Assessment</td>
</tr>
<tr>
<td>West, Jason</td>
<td>Ph.D., 2002/University of Georgia</td>
<td>Assistant Professor</td>
<td>Ecosystem Ecology</td>
</tr>
<tr>
<td>Whisenant, Steven</td>
<td>Ph.D., 1982/TAMU</td>
<td>Professor</td>
<td>Ecological Restoration</td>
</tr>
<tr>
<td>Wilcox, Bradford</td>
<td>Ph.D., 1986/New Mexico State University</td>
<td>Professor</td>
<td>Hydrology</td>
</tr>
<tr>
<td>Wu, X. Ben</td>
<td>Ph.D., 1991/Tennessee</td>
<td>Professor</td>
<td>Landscape Ecology</td>
</tr>
<tr>
<td>Faculty</td>
<td>Degree, Year/University</td>
<td>Discipline</td>
<td>Current Position</td>
</tr>
<tr>
<td>------------------</td>
<td>---------------------------------</td>
<td>----------------------</td>
<td>------------------</td>
</tr>
<tr>
<td>Hauck, Larry</td>
<td>Ph.D., 1999/UT-Arlington</td>
<td>Civil Engineering</td>
<td>Res Prof</td>
</tr>
<tr>
<td>Lambert, Barry</td>
<td>Ph.D., 2001/Kansas State Univ</td>
<td>Animal Science</td>
<td>Asst Prof</td>
</tr>
<tr>
<td>Little, Bert</td>
<td>Ph.D., 1985/UT-Austin</td>
<td>Health Sci</td>
<td>Prof</td>
</tr>
<tr>
<td>Mueller, Jim</td>
<td>Ph.D., 1999/Texas Tech</td>
<td>Wildlife Science</td>
<td>Asst Prof</td>
</tr>
<tr>
<td>Muir, James</td>
<td>Ph.D., 1989/Univ of Florida</td>
<td>Agronomy</td>
<td>Prof</td>
</tr>
<tr>
<td>Osei, Edward</td>
<td>Ph.D., 1994/Iowa State Univ</td>
<td>Ag Economics</td>
<td>Res Econ</td>
</tr>
<tr>
<td>Thompson, Carol</td>
<td>Ph.D., 1993/Univ of Iowa</td>
<td>Geology</td>
<td>Assoc Prof</td>
</tr>
<tr>
<td>Wang, XiXi</td>
<td>Ph.D., 2001/Iowa State</td>
<td>Ag Engineering</td>
<td>Asst Prof</td>
</tr>
<tr>
<td>Wittie, Roger</td>
<td>Ph.D., 1992/New Mexico State</td>
<td>Range Science</td>
<td>Prof</td>
</tr>
<tr>
<td>Yu, Man</td>
<td>Ph.D., 2000/Texas Tech</td>
<td>Ag Economics</td>
<td>Assoc Prof</td>
</tr>
</tbody>
</table>

**Support Teaching Faculty**

<table>
<thead>
<tr>
<th>Faculty</th>
<th>Degree, Year/University</th>
<th>Discipline</th>
<th>Current Position</th>
<th>Area(s) of Expertise</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cummings, Hennen</td>
<td>Ph.D., 2004/North Carolina State U</td>
<td>Crop Science</td>
<td>Asst Prof</td>
<td>Turf/Weed Science</td>
</tr>
<tr>
<td>Higgins, Chris</td>
<td>Ph.D., 2005/Texas Tech</td>
<td>Biology</td>
<td>Asst Prof</td>
<td>Animal Behavior</td>
</tr>
<tr>
<td>Kattes, David</td>
<td>Ph.D., 1992/Texas Tech</td>
<td>Entomology</td>
<td>Assoc Prof</td>
<td>Entomology/Crop Sci</td>
</tr>
<tr>
<td>Keith, Donald</td>
<td>Ph.D., 1968/U of Southern Cal</td>
<td>Biology</td>
<td>Prof</td>
<td>Freshwater Ecology</td>
</tr>
<tr>
<td>McGahan, Donald</td>
<td>Ph.D., 2007/U of Cal - Davis</td>
<td>Soil Science</td>
<td>Asst Prof</td>
<td>Env Soil Chemistry</td>
</tr>
<tr>
<td>Nelson, Allan</td>
<td>Ph.D., 1994/Univ of Oklahoma</td>
<td>Plant Systematics</td>
<td>Assoc Prof</td>
<td>Plant Evolution</td>
</tr>
<tr>
<td>Pfau, Russel</td>
<td>Ph.D., 2000/Oklahoma State</td>
<td>Biology</td>
<td>Prof</td>
<td>Population Genetics</td>
</tr>
<tr>
<td>Rathburn, Harold</td>
<td>Ph.D., 1989/Kansas State</td>
<td>Biochemistry</td>
<td>Assoc Prof</td>
<td>Molecular Biology</td>
</tr>
<tr>
<td>Sanderford, Max</td>
<td>Ph.D., 1999/UT-Austin</td>
<td>Physiology</td>
<td>Assoc Prof</td>
<td>Animal Physiology</td>
</tr>
<tr>
<td>Simpson, Charles</td>
<td>Ph.D., 1967/TAMU</td>
<td>Genetics</td>
<td>Prof</td>
<td>Plant Breeding</td>
</tr>
<tr>
<td>Sudman, Phil</td>
<td>Ph.D., 1989/TAMU</td>
<td>Zoology</td>
<td>Assoc Prof</td>
<td>Population Genetics</td>
</tr>
</tbody>
</table>
V. Other Resources
   A. Laboratory Facilities

   **College-level laboratory capability**

   Numerous traditional science-based teaching and research laboratories in the College of Agricultural and Environmental Sciences and in the College of Science and Technology at Tarleton State University are currently available to undergraduate and masters students. These labs include chemistry and biology labs, animal and dairy science, soil science, entomology, plant analytical, environmental science, hydrology, etc.

   These labs as well as additional research facilities at the Texas A&M System AgriLife Research and Extension Center in Stephenville will be available for use by students in the proposed joint program. Also, highly specialized research technology will be made available to Ph.D. students, including:

   - Reverse Transcription-Polymerase Chain Reaction (RT-PCR) which is the most sensitive technique for mRNA detection and quantification currently available.

   - Automated DNA Analysis System which allows rapid DNA sequencing and DNA fingerprinting.

   - Miniflex II X-Ray Diffractometer which represents the latest technology in non-destructive analytical techniques for quantifying a number of different materials including environmental contaminants of soils, water and other solids.

   - Inductively Coupled Plasma Atomic Emission Spectrometer (ICP-AES) provides capability to simultaneously determine over 35 elements (many of widespread environmental and agronomic importance) at parts per billion accuracy. Applications include elemental determination on soils, composts, vegetation, feeds, etc.

   - Other research equipment includes a GC-mass spectrometer, an FT-IR spectrometer, an FT-NMR spectrometer, several chromatographs, a LECO Carbon/Nitrogen analyzer, and atomic absorption and UV-visible spectrometers. In addition, a variety of water-quality testing equipment is available for field use.

   Students in the joint doctoral program will have full access to laboratory equipment in the Department of Ecosystem Science and Management on the Texas A&M – College Station campus.

   The Texas Legislature has authorized construction of the $11.1 million Southwest Regional Dairy Center on the Tarleton campus. The new state-of-the-art Center will be the only University dairy research and teaching facility in Texas, and will greatly strengthen Tarleton’s natural resources management research capabilities. Tarleton is currently seeking a $9.1 million federal research appropriation to support its research in bio-fuels recovery from agricultural wastes. The Tarleton Agricultural Center consists of a 2,000 acre
university farm with a wide range of livestock and other agricultural teaching and research facilities.

Texas Institute for Applied Environmental Research

Laboratory facilities at the Texas Institute for Applied Environmental Research (TIAER) located on the Tarleton State University campus are accredited by the National Environmental Laboratory Accreditation Program and the laboratory staff have extensive experience in analyzing surface water samples, soils and sediments. The laboratory maintains a secure facility that ensures the protection of client samples for production and integrity of legally-defensible data. Laboratory analytical capabilities include dissolved and suspended nutrients, oxygen demand, solids, chlorophyll, bacteria, heavy metals and pesticides/herbicides. In addition to specific detection instrumentation that includes a variety of spectrophotometers, TIAER has an assortment of laboratory support equipment such as ovens, incubators, water baths, balances and sample preparation devices.

The biologists, chemists and student assistants undergo thorough training prior to data production. Standardized procedures are used to adhere to U.S. Environmental Protection Agency and Texas Commission on Environmental Quality testing protocols. The TIAER Laboratory’s Quality Control/Quality Assurance section is audited by state and federal authorities and maintains oversight on laboratory functions.

Center for Agribusiness Excellence

The Center for Agribusiness Excellence (CAE), founded in 2000 on the Tarleton State University campus, is a data mining research center. It has a data warehouse that is the single most complete collection of digital data on U.S. agriculture that exists. It is comprised of USDA Risk Management Agency (RMA) data on every farmer in the U.S., covering more than 300 million acres of arable land. The data include production and loss history from 1990 to the present.

In conjunction with the RMA data, CAE has designed and engineered a satellite data warehouse of MODIS (from NASA) and AWiFS (Indian satellite) data. The satellite data is georeferenced to the farm sub-unit level using the common land unit (CLU) from the USDA Farm Service Agency. Each CLU is a farm field that is a digitized polygon which has a latitude and longitude for each corner. Using the CLU, it is possible to monitor vegetative health, moisture content, and temperature twice daily throughout the growing season.

CAE is replacing legacy computing equipment with a $5.4M data warehouse system that is GIS enabled, and has over 100 terabytes of storage, and is among the most powerful computing platforms available in 2008. CAE’s data center is linked to the USDA through a broadband VPN that enables constant data sharing and updates with USDA offices in Kansas City, Washington D.C., and more than 2000 field offices nationwide.

The Texas Data Mining Research Institute (TDMRI), founded in 2003, is another agriculture-related data mining project. The Institute is comprised of a comprehensive data warehouse
of RMA and FSA data, as mandated by law in the 2002 Farm Bill. The overarching objective is to reconcile FSA and RMA data to produce a single version of all available data to more effectively deliver safety net and subsidy programs to the backbone of the U.S. food and fiber supply chain - from field to market to consumer.

Additionally, CAE is launching a collaborative effort with NOAA to analyze the effect of global climate change on U.S. crop production. Over 340 papers have been published on the topic, with no general consensus. Importantly, prior investigations were handicapped by having only aggregate data at the regional and county levels. The present research initiative is unique because it will be possible to begin at the farm field level and micro-environment level, and work up to higher levels of geographic aggregation.

B. Library

Texas A&M University Libraries: Rangeland Ecology & Management Collection (submitted by Carmelita N. Pickett, Head of Collection Development & Acquisitions Services, College Station)

The Texas A&M University (TAMU) Libraries can support a Joint Doctor of Philosophy (Ph.D.) program in Rangeland Ecology and Management with Tarleton State University. The library maintains subscriptions to the top tier journals in Rangeland Ecology and Management along with access to key indices like AGRIS, CAB Abstracts, Web of Science, Science Direct, Agricola, BIOSIS, and Biotech & Agricultural Index to name a few. The library has a collaborative approach to purchasing key resources by encouraging and supporting faculty and student recommendations for new resources. Recommendations for databases, scholarly journals, and monographs can be made through the assigned subject librarian for Agriculture & Life Sciences or the library’s online “Suggest a Purchase” form.

Texas A&M University Libraries is also a member of the Association of Research Libraries (ARL). This distinct membership is based on TAMU Libraries distinct collections, commitment to servicing the scholarly community, and leadership. In addition, TAMU Libraries currently holds membership in the Greater Western Library Alliance (GWLA) which allows our campus users access to the holdings of 31 other research libraries from 16 Midwestern states. This membership allows the University Libraries to negotiate consortium agreements that benefit research in rangeland ecology. Another important consortium membership includes the Center for Research Libraries (CRL) whose mission is to foster and advance scholarly inquiry by granting members access to its journals, newspapers, dissertations and electronic resources.

Students in the joint doctoral program for Rangeland Ecology and Management program who attend Tarleton State University will have access to Texas A&M collections and resources through interlibrary loan or other arrangements. Access to electronic resources will be granted within the scope of TAMU Libraries license agreements.

Collection Highlights
• TAMU Libraries ranks among the top 40 libraries recognized by the Association of Research Libraries (ARL).

• The University Libraries’ collection includes over 51,000 serials and 4 million volumes.

• Selective List of Journals Consulted for Rangeland Ecology and Management:
  

• Cushing Library (Rare Books, Manuscript & Archival Repository)
  
  The Jeff Dikes Range Livestock Collection is housed in Cushing Library. Its breadth is phenomenal. The collection totals some 25,000 volumes relating to cattle, horses, sheep, and the landscapes in which they can be found. A combination of rare material and current volumes, pamphlets, and journals, the collection also contains the archives of Dykes’ rare book business and the correspondence of the legendary cattle magnate Charles Goodnight. With an extensive collection of artwork, including paintings by Tom Lea and José Cisneros, sculpture by Frederick Remington, and a colored print inscribed by J. Frank Dobie.

• Western Rangelands Partnership
  
  Rangelands West (http://www.rangelandswest.org) website is part of the Agriculture Network Information Center (AgNIC). This site represents a national effort to bring together a spectrum of agricultural resources and tools. Texas A&M University (http://rangeland.tamu.edu/TX/index.htm) partners with this project along with 18 other states. Partner states include: Alaska, Arizona, California, Colorado, Hawaii, Idaho, Kansas, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oklahoma, Oregon, South Dakota, Utah, Washington and Wyoming.

Tarleton State University Library (submitted by Donna Savage, University Librarian, Stephenville)

The combined resources of monographs and journals in both the traditional and electronic collections held in the Dick Smith Library are sufficient to support a joint doctoral program in Rangeland Ecology and Management offered in cooperation with Texas A&M University.

Tarleton is fortunate to have an exceptional library with access to a broad range of research resources. The agriculture book collection is broad, reflecting the historic tradition of agriculture study at Tarleton. Library resources in support of agriculture programs and its related fields have been added to the collection over a period of many years. The collection is updated regularly through recommendations submitted by the departmental faculty,
professional librarians, and an approval plan for acquiring new publications based on a profile that supports each program's curriculum. Currently the library receives approximately 40-45 new publications a year through the approval program that would support this program.

Total monographs (print and electronic) in all areas of agriculture include approximately 9,000 titles. Monograph holdings in more specific subject areas related to this program include:

<table>
<thead>
<tr>
<th>Category</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural Resource Management</td>
<td>168</td>
</tr>
<tr>
<td>Land Management</td>
<td>288</td>
</tr>
<tr>
<td>Water Management</td>
<td>1,046</td>
</tr>
<tr>
<td>Soil Management</td>
<td>500</td>
</tr>
<tr>
<td>Environmental Sciences (Ag Wastes)</td>
<td>34</td>
</tr>
<tr>
<td>e-Books</td>
<td>207</td>
</tr>
<tr>
<td>Total</td>
<td>2,243</td>
</tr>
</tbody>
</table>

The library offers over 1,100 periodical titles in either print or electronic format that will support the joint program. Students and faculty are able to locate periodical articles and customize bibliographies using a selection of approximately 200 electronic resources. Databases that provide the strongest support to a degree in Rangeland Ecology and Management include Annual Reviews, BioOne, Environmental Engineering Abstracts, InformaWorld, Sage Journals Online, Science Direct, SpringerLink, Web of Knowledge, Wildlife and Ecology Studies Worldwide, and Wiley InterScience. In addition, Agricola PlusText and Environment Complete were both added in 2009 to support this program.

A recent review of the periodicals resources that support the joint Ph.D. program in Rangeland Ecology and Management was conducted. Using Journal Citation Reports, eigenfactor and Magazines for Libraries, 145 important journals were identified. The review reveals that of the titles identified, the library has access to all but 10 of them, or 93%. Most of the titles are available electronically, which allows convenient access by off-campus users.

To assist users in locating materials from the library’s wide selection of databases, MetaLib aggregates searches across multiple databases and SFX links citations to available full-text articles. When full-text is not available, SFX will complete an Interlibrary Loan (ILLiad) request form to let users request materials from another library. ILLiad and ARIEL, an Internet-based document delivery system, deliver needed articles electronically or by fax in a matter of days, sometimes hours. In addition, the TexShare program provides the University community with borrowing privileges at academic and public libraries throughout the state.

Librarians provide tours, bibliographic instructional sessions, and hands-on, personal instruction to assist users in the use of library services and resources. Members of the library staff have also created subject-oriented Web-based reference tools and other
resources linked from the library website. Also, the Ask a Librarian program allows students to ask questions of a reference library via email 24/7.

In January 2006, the Dick Smith Library completed a $3.9 million renovation and expansion of the facility. The library's 75,000 sq. ft. of usable floor space is divided into three floors: the lower floor is dedicated to Special Collections, which include the Curriculum, Audio-visual, and Map Collections; the main floor house the Reference, Documents, Periodicals, and Microform Collections, as well as staff space for Circulation Control, Reference and Periodicals Services, and Technical Services; and the upper floor houses the general collection, which is the main body of printed materials in the building, as well as large reading areas, group study rooms, and administrative offices.

The Library will continue to strengthen the monograph collection, periodical subscriptions, online databases, services, and other resources in support of the joint doctoral program. Students in this joint program will also benefit from the resources of the Texas A&M University Libraries.

VI. Costs and Funding

The Department of Ecosystem Science and Management at Texas A&M University will provide sufficient faculty resources, office space, and laboratory facilities to support the additional PhD students through the joint program. Additional resources such as competitive travel grants, graduate research grants, and graduate fellowships will be available to the PhD students in the joint program as well. (See appendix for Costs and Funding Worksheets)

The College of Agricultural and Environmental Sciences at Tarleton State University will provide the Ph.D. students in the joint program with graduate assistants (stipends) at the same level as that for other Ecosystem Science and Management Ph.D. students; fringe benefits including insurance; in-state tuition (9 SCH each for Fall and Spring and 6 SCH for Summer); and research and travel expenses. Support will also be provided for Texas A&M faculty travel to necessary meetings and field work at Tarleton. (See appendix for Costs and Funding Worksheets)
Appendix

Vitae of faculty (2 sets)

Costs and Funding Worksheets (2 sets)
WORKSHEETS FOR SECTION III (COSTS & FUNDING) OF CB'S NEW PROGRAM REQUEST FORM
Completion of 5-years' of new costs: Serves as documentation to institution's CFO and to System's VCASA office reviewers
Not required to be submitted to the CB with proposal

COSTS TO THE INSTITUTION OF THE PROGRAM/ADMINISTRATIVE CHANGE
(TAMUS modified)

Note: Use this chart to indicate the dollar costs to the institution that are anticipated from the change requested.

<table>
<thead>
<tr>
<th>Cost Category</th>
<th>Cost Sub-Category</th>
<th>1st Year FY 11</th>
<th>2nd Year FY 12</th>
<th>3rd Year FY 13</th>
<th>4th Year FY 14</th>
<th>5th Year FY 15</th>
<th>TOTALS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faculty Salaries</td>
<td>(New)</td>
<td>-0-</td>
<td>70,000</td>
<td>70,000</td>
<td>70,000</td>
<td>70,000</td>
<td>280,000</td>
</tr>
<tr>
<td></td>
<td>(Reallocated)</td>
<td>230,000</td>
<td>230,000</td>
<td>230,000</td>
<td>230,000</td>
<td>230,000</td>
<td>1,150,000</td>
</tr>
<tr>
<td>Program Administration</td>
<td>(New)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(Reassignments)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Graduate Assistants</td>
<td>(New)</td>
<td>-0-</td>
<td>35,000</td>
<td>70,000</td>
<td>70,000</td>
<td>105,000</td>
<td>280,000</td>
</tr>
<tr>
<td></td>
<td>(Reallocated)</td>
<td>70,000</td>
<td>70,000</td>
<td>70,000</td>
<td>70,000</td>
<td>70,000</td>
<td>350,000</td>
</tr>
<tr>
<td>Clerical/Staff</td>
<td>(New)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(Reallocated)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supplies &amp; Materials</td>
<td></td>
<td>5,000</td>
<td>5,000</td>
<td>5,000</td>
<td>5,000</td>
<td>5,000</td>
<td>25,000</td>
</tr>
<tr>
<td>Library</td>
<td></td>
<td>10,000</td>
<td>10,000</td>
<td>10,000</td>
<td>10,000</td>
<td>10,000</td>
<td>50,000</td>
</tr>
<tr>
<td>Equipment &amp; IT Resources**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Facilities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (Identify)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TOTALS</strong></td>
<td></td>
<td>315,000</td>
<td>420,000</td>
<td>455,000</td>
<td>455,000</td>
<td>490,000</td>
<td>2,135,000</td>
</tr>
</tbody>
</table>

* Include costs incurred for three years before the proposal is approved by the Board (e.g., new faculty, library resources, equipment, facilities remodeling, etc.).

** IT = Instructional Technology

Explanations:
WORKSHEETS FOR SECTION III (COSTS & FUNDING) OF CB'S NEW PROGRAM REQUEST FORM

Completion of 5-years' of new costs: Serves as documentation to institution’s CFO and to System’s VCASA office reviewers

Not required to be submitted to the CB with proposal
WORKSHEETS FOR SECTION III (COSTS & FUNDING) OF CB'S NEW PROGRAM REQUEST FORM
Completion of 5-years' of new costs: Serves as documentation to institution's CFO and to System’s VCASA office reviewers
Not required to be submitted to the CB with proposal

**ANTICIPATED SOURCES OF FUNDING**

*Note:* Use this chart to indicate the dollar amounts anticipated from various sources. Use the reverse side of this form to specify as completely as possible each non-formula funding source.

<table>
<thead>
<tr>
<th>Funding Category</th>
<th>1st Year FY 11</th>
<th>2nd Year FY 12</th>
<th>3rd Year FY 13</th>
<th>4th Year FY 14</th>
<th>5th Year FY 15</th>
<th>TOTALS</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Formula Income*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>II. Other State Funding*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>III. Reallocation of Existing Resources*</td>
<td>200,000</td>
<td>200,000</td>
<td>200,000</td>
<td>200,000</td>
<td>200,000</td>
<td>1,000,000</td>
</tr>
<tr>
<td></td>
<td>+ 70,000</td>
<td>+115,000</td>
<td>+150,000</td>
<td>+120,000</td>
<td>+110,000</td>
<td>+565,000</td>
</tr>
<tr>
<td></td>
<td>=270,000</td>
<td>=315,000</td>
<td>=350,000</td>
<td>=320,000</td>
<td>=310,000</td>
<td>=1,565,000</td>
</tr>
<tr>
<td>IV. Federal Funding* (In-hand only)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V. Other Funding* (Research Grants-Federal, State, and/or Private)</td>
<td>45,000 **</td>
<td>105,000 **</td>
<td>105,000 **</td>
<td>135,000 **</td>
<td>180,000 **</td>
<td>570,000 **</td>
</tr>
<tr>
<td>TOTALS</td>
<td>315,000</td>
<td>420,000</td>
<td>455,000</td>
<td>455,000</td>
<td>490,000</td>
<td>2,135,000</td>
</tr>
</tbody>
</table>

*For more information, please refer to the accompanying Anticipated Sources of Funding: Explanatory Notes and Examples.

**Portion of research grant funding designated for salary
**NON-FORMULA SOURCES OF FUNDING**

*Note: Use this form to specify as completely as possible each of the non-formula funding sources for the dollar amounts listed on the reverse side of this form.*

<table>
<thead>
<tr>
<th>Funding Category</th>
<th>Non-Formula Funding Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>II. Other State Funding*</td>
<td></td>
</tr>
<tr>
<td></td>
<td>#1</td>
</tr>
<tr>
<td></td>
<td>#2</td>
</tr>
<tr>
<td>III. Reallocation of Existing Resources*</td>
<td></td>
</tr>
<tr>
<td></td>
<td>#1 Human Sciences ($1,000,000 over 5 years)</td>
</tr>
<tr>
<td></td>
<td>#2 General Fund ($565,000 over 5 years)</td>
</tr>
<tr>
<td>IV. Federal Funding*</td>
<td></td>
</tr>
<tr>
<td></td>
<td>#1</td>
</tr>
<tr>
<td></td>
<td>#2</td>
</tr>
<tr>
<td>V. Other Funding*</td>
<td></td>
</tr>
<tr>
<td></td>
<td>#1 Research Grants (Federal, State, and/or Private) ($570,000 over 5 years)**</td>
</tr>
<tr>
<td></td>
<td>#2</td>
</tr>
</tbody>
</table>

*For more information, please refer to the accompanying *Anticipated Sources of Funding: Explanatory Notes and Examples.*

**Portion of research grant funding designated for salary
WORKSHEETS FOR SECTION III (COSTS & FUNDING) OF CB'S NEW PROGRAM REQUEST FORM
Completion of 5-years' of new costs: Serves as documentation to institution's CFO and to System's VCASA office reviewers
Not required to be submitted to the CB with proposal

ANTICIPATED SOURCES OF FUNDING: EXPLANATORY NOTES AND EXAMPLES

I. Formula Income
   A. The first two years of any new program should not draw upon formula income to pay for the program.
   
   B. For each of Years 3 through 5, enter the smaller of:
      1. the new formula income you estimate the program would generate, based on projected enrollments and formula funding rates; or
      2. half of the estimated program cost for that year.
   
   C. Because enrollments are uncertain and programs need institutional support during their start-up phase, it is the Coordinating Board's policy to require institutions to demonstrate that they can provide:
      1. sufficient funds to support all the costs of the proposed program for the first two years (when no new formula funding will be generated); and
      2. half of the costs of the new program during years three through five.
   
   D. When estimating new formula income, institutions should take into account the fact that students switching programs do not generate additional formula funding to the institution. For example, if a new master's program has ten students, but five of them switched into the program from existing master's programs at the institution, only five of the students will generate new formula income to help defray the costs of the program.

II. Other State Funding
   This category could include special item funding appropriated by the legislature, or other sources of funding from the state that do not include formula-generated funds (e.g., HEAF, PUF, etc.).

III. Reallocation of Existing Resources:
   If faculty in existing, previously budgeted positions are to be partially or wholly reallocated to the new program, you should explain in the text of your proposal how the institution will fulfill the current teaching obligations of those faculty and include any faculty replacement costs as program costs in the budget.

IV. Federal Funding
   Only federal monies from grants or other sources currently in hand may be included. Do not include federal funding sought but not secured. If anticipated federal funding is obtained, at that time it can be substituted for funds designated in other funding categories. Make note within the text of the proposal of any anticipated federal funding.

Other Funding
This category could include Auxiliary Enterprises, special endowment income, or other extramural funding.
Dr. Hennen D. Cummings
Tarleton State University
Division: Academic Affairs: College of Agriculture and Human Sciences
Agribus, Agron, Hort, & Rng Mg
(254) 968-9223
Email: HCUMMINGS@TARLETON.EDU

Education

Ph D, North Carolina State University, 2004.
Major: Weed Science in Turfgrass
Supporting Areas of Emphasis: Crop Science
Dissertation Title: Pesticide Downward Movement in a Bermudagrass System Compared with
Movement in a Fallow System

MS, North Carolina State University, 2001.
Major: Weed Science in Turfgrass
Supporting Areas of Emphasis: Crop Science
Dissertation Title: The effects of plant growth regulators, preemergence herbicides, and soil
temperature on creeping bentgrass root growth

BS, North Carolina State University, 1997.
Major: Turfgrass Management
Supporting Areas of Emphasis: Agronomy

BS, University of North Carolina - Chapel Hill, 1989.
Major: Environmental Sciences and Engineering
Supporting Areas of Emphasis: Public Health

Administrative Assignments

Director, University, August 20, 2004 - Present.
Responsibilities: Director of Golf Course Management. Management of the Turfgrass Field
Laboratory and Greenhouse. Supervise 2 undergraduate student workers and graduate
students. Coordinate mowing, fertilization, irrigation, pest control, equipment
maintenance/repair, top dressing, aeration, etc. Secure funds and donations for fertilizers,
pesticides, equipment, and turf maintenance products. Shop for equipment, parts, seed, and
tools.

Faculty/Staff Rank

Starting Rank: Assistant Professor (August 20, 2004)
Assistant Professor: August 20, 2004
Tenure Decision: August 2010

Licensures and Certifications

Texas Pesticide Applicator's License, Texas Department of Agriculture. (September 2004 -
Present).

Texas Landscape Irrigator, Texas Commission on Environmental Quality. (March 1, 2006 -
August 31, 2011).
Professional Memberships

Golf Course Superintendents Association of America. (August 20, 2004 - Present).
Guest Speaker, Texas Turfgrass Association. (August 20, 2004 - Present).
College Representative on Board, West Texas Golf Course Superintendents Association. (August 20, 2004 - Present).

Development Activities Attended

Field Day, "Texas A&M Turfgrass Field Day," Texas A&M.


Continuing Education Program, "Golf Course Superintendents Association of America and Golf Industry Show," GCSAA. (February 21, 2007 - February 24, 2007).


"Texas Turfgrass Association annual meeting," Texas Turfgrass Association annual meeting. (December 11, 2006 - December 13, 2006).


Meeting, "Texas Nursery and Landscape Association (TNLA) Meeting," Texas Nursery and Landscape Association (TNLA). (October 17, 2006).


"United States Golf Association Regional Meeting," USGA. (March 30, 2006).


Conference Attendance, "West Texas Golf Course Superintendents Association of America annual meeting," West Texas Golf Course Superintendents Association of America. (October 24, 2005 - October 26, 2005).


TEACHING

Teaching Experience

Tarleton State University
   AGRI 585, Graduate Seminar, 1 course.
   AGRI 588, Thesis, 8 courses.
   AGRN 315, Weed Management, 1 course.
   AGRN 413, Weed Control, 2 courses.
   AGRN 586, Agrn Problems, 1 course.
   HORT 270, Intro to Turfgrass Science, 3 courses.
   HORT 315, Weed Management, 1 course.
   HORT 380, Golf Course Design & Construct, 2 courses.
   HORT 470, Turfgrass Mgt & Irrigation, 2 courses.
   HORT 480, Golf Course Mgt, 3 courses.
   HORT 486, Prob-Turfgrass System, 9 courses.
   HORT 485, Golf Course Internship, 1 course.
   HORT 586, Horticulture Problems, 2 courses.
   HORT 590, Special Topics, 1 course.

Non-Credit Instruction

Continuing Education, Texas Turfgrass Association, 320 participants. (July 12, 2009 - July 14, 2009).

Field Day, Texas Sports Turf Managers Association, 49 participants. (June 17, 2009).

Workshop, Ag Services and Development, 13 participants. (June 20, 2008).

Seminar, Staff Development. (May 15, 2008).

Seminar, West Texas Golf Course Superintendents Association, 200 participants. (October 30, 2007).

Seminar, Professional Grounds Conference, 1200 participants. (February 2007).

Seminar, Sports Turf Managers Association, 200 participants. (January 2007).

Seminar, West Texas Golf Course Association, 200 participants. (October 2006).

Seminar, Fall Garden Market, 50 participants. (September 2006).


Seminar, East Texas Turfgrass, 200 participants. (February 2005).
Seminar, East Texas Turfgrass, 200 participants. (February 2005).

Seminar, Texas Turfgrass Association, 500 participants. (December 2004).

Seminar, Texas Turfgrass Association, 500 participants. (December 2004).

Seminar, Texas Turfgrass Association, 500 participants. (December 2004).

Seminar, West Texas Golf Course Superintendents Association, 200 participants. (October 2004).

**Directed Student Learning**

Master's Thesis Committee Member, Other (Within Tarleton State University). (July 2008 - Present).
Advised: Molly Lesley

Master's Thesis Committee Chair, "Effect of Vitazyme on Bermudagrass Tolerance to Traffic," Other (Within Tarleton State University). (May 2006 - Present).
Advised: Leslie Beck

Advised: Jack Rose

Master's Thesis Committee Member, "Spacial Distribution of Heavy Metals in the Soils of Erath County." (September 2006 - August 2008).
Advised: Mahendra Dia

Master's Thesis Committee Member, "Phosphorus Sequestration in Soils in Erath County," Other (Within Tarleton State University). (September 2004 - August 2006).
Advised: Landon Darilek

**RESEARCH**

**Published Intellectual Contributions**

**Refereed Journal Articles**


**Conference Proceedings**


**Journal Articles**


**Presentations Given**

Beck, L. (Presenter & Author), Cummings, H. D. (Author Only), TAMU System pathways to the Doctorate Student Research Symposium, "Evaluation of Vitazyme as a Fertilizer Supplement in Increasing Resistance to Damage from Traffic," Tarleton State University, Stephenville, TX. (October 2008).


Beck, L. (Presenter & Author), Cummings, H. D. (Author Only), Tarleton State University Research Symposium, "Evaluation of Aquatrols Experimental Products on a Tall Fescue Blend," Tarleton State University, Stephenville, TX. (February 2008).


Cummings, H. D. (Presenter & Author), American Society of Agronomy, "Downward movement of radio-labeled simazine in a bermudagrass system and a fallow system.," American Society of Agronomy, Salt Lake City, UT. (November 7, 2005).

Media Contributions

Magazine

Golf Course Management.

Newspaper

Empire Tribune. (May 20, 2007).

Radio

KSTV Mighty 93. (June 23, 2009).

KSTV Mighty 93. (May 16, 2007).

KSTV Mighty 93. (March 13, 2007).

KSTV Mighty 93. (February 6, 2007).

Contracts, Grants and Sponsored Research

Sponsored Research

Cummings, Hennen Dock, "Evaluation of Bermudagrass Sod as a Mechanism to Remove Phosphorus from Raw Bovine Manure," Sponsored by NRCS, Federal, $6,479.00.

Cummings, Hennen Dock (Supporting), "Evaluation of Bermudagrass Sod as a Mechanism to Remove Phosphorus from Raw Bovine Manure," Sponsored by NRCS, Federal, $6,479.00.

Cummings, Hennen Dock, "Evaluation of Bugaloe as a Surfactant to Enhance the Efficacy of TranXit Using Chlortinated and Not Chlorinated Water," Sponsored by Bugaloe, Private, $2,550.00.

Cummings, Hennen Dock (Principal), "Evaluation of Six Experimental Soil Wetting Agents from Aquatrols," Sponsored by Tarleton, Tarleton State University, $9,775.00.


Cummings, Hennen Dock (Principal), "Turfgrass Traffic Injury Abatement Systems," Sponsored by USGA, Private, $8,924.00.

Cummings, Hennen Dock (Principal), "Field Evaluation of Six Experimental Soil Surfactants in a Turfgrass Green Exhibiting Localized Dry Spot," Sponsored by Aquatrols Corporation, Private, $1,628.00. (April 2009 - Present).

Cummings, Hennen Dock (Principal), "Turfgrass Traffic Injury Abatement," Sponsored by Tarleton State University, State, $5,232.00. (January 2009 - Present).

Cummings, Hennen Dock (Principal), "Field Evaluation of Seven Experimental Soil Surfactants in TifSport Bermudagrass," Sponsored by Aquatrols Corporation, Private, $10,171.00. (April 2009 - January 2010).


Cummings, Hennen Dock (Principal), "Evaluation of Aquatrols Experimental Products on TifSport Bermudagrass," Sponsored by Aquatrols, Private, $9,775.00. (March 2007 - December 2007).


Cummings, Hennen Dock (Principal), "One and Two Year Old Ryegrass in Monoculture Responses to Herbicides Typically Used to Remove Ryegrass Overseeded in Bermudagrass," Sponsored by Dupont, Monsanto, ISK, Bayer Environmental Science, Private, $4,900.00. (April 2006 - December 2006).

Cummings, Hennen Dock (Principal), "Phytotoxicity of Eight Aquatrols Experimental Compounds to Tall Fescue," Sponsored by Aquatrols, Private, $7,708.00. (April 2006 - December 2006).

Cummings, Hennen Dock (Principal), "Efficacy of Two Becker Underwood Experimental Soil Wetting Agents in Tall Fescue," Sponsored by BeckerUnderwood, Private, $1,000.00. (March 2006 - December 2006).

Cummings, Hennen Dock (Principal), "Efficacy of Experimental RoundUp Formulations on Tall Fescue," Sponsored by Monsanto, Private, $1,500.00. (March 2006 - December 2006).


Research in Progress

"Traffic Injury Abatement Systems in Bermudagrass" (Planning)
Trays grids, or modules can support the weight of vehicles and prevent ruts from forming in turfgrass areas while still allowing for infiltration and less runoff
"Vertical as a salt manager" (Planning)  
Evaluate product to see if salts in root zone are reduced.

**SERVICE**

**Department Service**

Attendee, Meeting, Texan Tour Representative. (September 2004 - Present).
Attendee, Meeting, Departmental Program Committee. (January 2006 - May 2008).
Attendee, Meeting, Geneticist Search Committee. (September 2007 - December 2007).

**College Service**

Attendee, Meeting, Phonathon. (February 7, 2008 - Present).
Committee Chair, Alumni Breakfast Entertainment Committee. (September 2004 - Present).
Attendee, Meeting, Agriculture Center Use Fee. (January 2007 - April 2007).

**University Service**

Committee Member, Excellence in Teaching Conference. (January 12, 2009 - Present).
Committee Member, Curriculum Review Committee. (September 18, 2008 - Present).
Committee Member, Edit Review Committee. (September 11, 2008 - Present).
Committee Member, Molley Lesley Graduate Student. (July 25, 2008 - Present).
Committee Chair, Leslie Beck Graduate Student. (August 2007 - Present).
Committee Member, Future Dairy Design. (January 2007 - Present).
Committee Member, Faculty Senate. (February 2006 - Present).
Committee Chair, Pie the Professor. (October 31, 2005 - Present).
Committee Member, Agriculture contest. (February 2005 - Present).
Committee Member, Faculty Development Committee. (October 2004 - Present).
Faculty Advisor, Tarleton Turfgrass Society. (August 2004 - Present).
Program Coordinator, NACTA Crop Contest. (September 2007 - April 18, 2008).
Task Force Member, Science Olympiad. (February 23, 2008).

Committee Member, Organized Research Grant Committee. (August 20, 2007).

Workshop Organizer, Lawn Care Workshop. (June 7, 2007).

Committee Member, Committee to Select University Stationer. (March 8, 2007 - March 23, 2007).

Committee Member, Committee to Select Housing Director. (January 2006 - April 2006).

Chairperson, Effective Soil Water Management for Quality Golf Course Turf.. (April 6, 2005).

**Professional Service**

Board of Directors of a Company, West Texas Golf Course Superintendents Association, Odessa, TX. (October 25, 2006 - Present).


Guest Speaker, Water Conservation Committee, Stephenville, TX. (September 6, 2007).


Workshop Organizer, Lawn Care Workshop, Stephenville, TX. (June 7, 2007).

Reviewer, Journal Article, Weed Technology. (December 20, 2006).

Invited Lecture, Fall Garden Market, Granbury, TX. (September 16, 2006).


Invited Lecture, Kids Know More, Stephenville, TX. (May 12, 2006).


Reviewer, Journal Article, Journal of Agriculture and Natural Resources. (March 14, 2006).


**Public Service**

Stephenville Water Conservation committee, Stephenville, TX. (March 2009 - Present).
Committee Member, Stephenville Water Conservation Committee, Stephenville, TX. (January 2006 - Present).

Track Organizer, First United Methodist Church, Stephenville, TX. (March 5, 2006).

**Consulting**

Academic, Tejas Golf Course, Stephenville, TX. (June 2007 - Present).

Litigation, Charlie Brown, Aledo, TX. (June 1, 2005 - September 30, 2005).

Academic, Buena Vistas Sod Farm, Honey Grove and Paris, TX. (May 12, 2005).
NAME: CHRISTOPHER L. HIGGINS, PH.D.

AREA OF EXPERTISE

- Animal behavior
- Ecology
- Ichthyology

EDUCATION

Ph.D., Biology, Texas Tech University (2005)
- Dissertation: *Functional groups in stream fishes: spatiotemporal variation, ontogenetic change, and patterns of diversity*
- Advisor: Dr. Richard E. Strauss

M.S., Biology, Texas Tech University (2001)
- Thesis: *Discrimination of Foraging Paths Produced by Different Search Tactics*
- Advisor: Dr. Richard E. Strauss

B.S., Biology, Angelo State University (1999)
- Research: *Home Range of the Nine-banded Armadillo, Dasypus novemcinctus, in the Concho Valley of Texas*
- Advisor: Dr. Robert C. Dowler

PROFESSIONAL EMPLOYMENT

Tarleton State University
- Assistant Professor (2005 - present)

South Plains College
- Instructor of Zoology (2004 - 2005)

Texas Tech University
- Teaching Assistant (2000 – 2004)

CURRENT ACTIVE RESEARCH PROJECTS

- Habitat selection in stream-dwelling cyprinids
- Functional groupings in stream fish assemblages
- Macroecological patterns in stream fish assemblages across various ecoregions

GRANTS AND FUNDING RECEIVED

University, Organized Research Grant.

Higgins, C.L. 2004. Functional groups in stream fishes: spatiotemporal variation, ontogenetic change, and patterns of diversity. $2,000 from Texas Tech University, Graduate School.

Higgins, C.L. 2001. Evolutionary significance of growth rates among five species from the family Poeciliidae. $2,000 from Texas Tech University, Department of Biological Sciences.

Higgins, C.L. 2000. Discrimination and classification of search paths produced by different search-tactic models. $2,400 from Texas Tech University, Department of Biological Sciences.

GRANTS AND FUNDING PENDING


REFEREED JOURNAL ARTICLES


MANUSCRIPTS IN REVIEW


Higgins, C.L. Spatiotemporal variation in fish assemblage structure based on functional groups and species composition. Southwestern Association of Naturalist.

PAPERS PRESENTED AT PROFESSIONAL MEETINGS


POSTERS PRESENTED AT PROFESSIONAL MEETINGS


GRADUATE COURSES CURRENTLY TEACHING

BIOL 598 – Research Design and Analysis
CURRENT GRADUATE STUDENTS

Amanda Barmore
- Thesis: *Habitat selection in stream-dwelling cyprinids: combining experimental and observational approaches*

GRADUATE STUDENTS COMPLETED

None

INVOLVEMENT ON COLLABORATIVE PROJECTS

I am currently part of a network of scientists gathering data on terrestrial gastropods in the Luquillo Experiment Forest, Puerto Rico. This project is funded by a NSF grant awarded to Mike Willig at the University of Connecticut, but Chris Bloch at Bridgewater State University is the primary person responsible for data collection. I mainly serve as a data analyst, although I help with data collection as well.

RESEARCH INFRASTRUCTURE

PHYSICAL FACILITIES

- Research lab equipped with artificial stream mesocosm and video imaging
- Research lab with enough space to house two graduate students

SPECIALIZED RESEARCH EQUIPMENT

- Open-channel flow meter (Flo-Mate 2000)
- Handheld multiparameter instrument (YSI-556)
- Smith-Root backpack electrofisher (LR-24)
Dr. David H. Kattes
Tarleton State University
Division: Academic Affairs: College of Agriculture and Human Sciences
Agribus, Agron, Hort, & Rng Mg
(254) 968-9214
Email: KATTES@TARLETON.EDU

Education

Ph D, Texas Tech University, 1992.
Major: Agronomy
Dissertation Title: A Comparison of Cottonseed Delinting Methods

MS, Texas A&M University, 1976.
Major: Entomology
Dissertation Title: Factors Affecting the Abundance of Banks Grass Mites in Grain Sorghum

BS, Texas A&M University, 1974.
Major: Entomology

Administrative Assignments

Responsibilities: Assistant Department Chairman

Professional Positions

Academic

Professor, Tarleton State University. (September 2000 - Present).
Professor, Western Texas College. (September 1, 1990 - August 31, 2000).

Professional

Owner, Kattes’ Farms. (January 1, 1980 - Present).

Faculty/Staff Rank

Starting Rank: Associate Professor (September 1, 2000)
Associate Professor: September 1, 2000
Full Professor: September 1, 2008
Tenure Decision: September 1, 2005

Licensures and Certifications

Professional Memberships

Texas Mosquito Control Association. (September 2002 - Present).

Board Member, West Texas Golf Course Superintendent's Association. (September 1990 - Present).

Director, West Texas Golf Course Superintendent's Association. (1990 - Present).

Southwestern Branch of ESA. (January 1974 - Present).

Entomological Society of America. (September 1, 1971 - Present).

American Mosquito Control Association. (September 2002 - December 2006).


Development Activities Attended


Conference Attendance, "CEU Conference," Univar Corp. (January 2008).


Continuing Education Program, "Continuing Education, ITV Distance Learning Program," Western Texas College. (July 1999).


TEACHING

Teaching Experience

Tarleton State University
AGRI 588, Thesis, 3 courses.
AGRI 590, Topics: Int Pest Management, 2 courses.
AGRN 105, Fundamentals of Crop Prod, 4 courses.
AGRN 425, Crop Prod and Mgmt, 3 courses.
AGRN 486, Agrn Probs, 5 courses.
AGRN 586, Agrn Problems, 4 courses.
ENTO 201, General Entomology, 5 courses.
ENTO 301, Veterinary Entomology, 5 courses.
ENTO 380, Integrated Pest Management, 1 course.
ENTO 405, Horticultural Entomology, 1 course.
ENTO 406, Integrated Pest Management, 1 course.
ENTO 416, Pesticides, 2 courses.
ENTO 506, Integrated Pest Management, 1 course.
HORT 486, Horticulture Problems, 1 course.
RNRM 484, Internship, 1 course.
RNRM 486, Prob-Wildlife Habitat Develope, 4 courses.

Directed Student Learning
Master's Thesis Committee Member, "Efficiency of using black soldier flies, Hermetia illucens L., to biologically manage Texas dairy waste," Animal Science.
Advised: Heidi Myers

Master's Thesis Committee Member, "EVALUATION OF VITAZYME AS A FERTILIZER SUPPLEMENT IN ESTABLISHING AND MAINTAINING BERMUDAGRASSES," Agribus, Agron, Hort, & Rng Mg.
Advised: Jack Rose

Other, "Non-thesis," Agribus, Agron, Hort, & Rng Mg.
Advised: Allison Wier

Other, Agribus, Agron, Hort, & Rng Mg.
Advised: Angie Smith

Other, Agribus, Agron, Hort, & Rng Mg.
Advised: Brandi Kelm

Advised: Brandon Burch

Other, "Non-thesis," Agribus, Agron, Hort, & Rng Mg.
Advised: Greer Pitman

Other, Agri Services and Development.
Advised: Honey Key

Other, Agribus, Agron, Hort, & Rng Mg.
Advised: Jeff Velsaka

Other, "Non-thesis," Agribus, Agron, Hort, & Rng Mg.
Advised: Manon Brinegar

Other, "Non-thesis," Agribus, Agron, Hort, & Rng Mg.
Advised: Sonia Ray

Master's Thesis Committee Chair, "Native and exotic grasses and nitrogen sources for sustainable forage production," Agribus, Agron, Hort, & Rng Mg. (June 1, 2009 - Present).
Advised: Rebecca Hackney

Master's Thesis Committee Chair, "Multi-location Evaluation of Prairie Acacia," Agribus, Agron, Hort, & Rng Mg. (June 2008 - Present).
Advised: Ray Noah

Master's Thesis Committee Chair, "Insecticide Resistance in House Fly, Musca domestica, Populations in Four Dairies in Central Texas, USA," Agribus, Agron, Hort, & Rng Mg. (August 2009).
Advised: Patrick Mccellelan

Advised: Leslie Beck

Advised: Emily Vinson
Other, Agri Services and Development. (December 2008).
Advised: Jendy Pelham

Master's Thesis Committee Chair, "Determination of Seed Size in Relationship to the Distance from the Main Axis in Arachis L.," Agribus, Agron, Hort, & Rng Mg. (September 2006 - December 2008).
Advised: John Williams

Master's Thesis Committee Chair, "., Effects of accumulated degree days on the population of H. vitripennis in Texas vineyards," Agribus, Agron, Hort, & Rng Mg. (May 2008).
Advised: Danny McDonald

Master's Thesis Committee Member, Biological Sciences. (May 2008).
Advised: Amy Wats

Advised: Wes Barnister

Awards and Honors


RESEARCH

Published Intellectual Contributions

Refereed Journal Articles


Conference Proceedings


http://download.clib.psu.ac.th/datawebclib/e_resource/e_database/agronomy/2006/techprog am/AM06/P22679.HTM

Other


Presentations Given


Kattes, D. H., Seminar, "Insect photography," Crop Sciences Department, Texas Tech University, Lubbock, TX. (March 1997).


Media Contributions

Newspaper

De Leon Free Press. (February 24, 2005).
De Leon Free Press. (May 2004).

Contracts, Grants and Sponsored Research

Grant

Kattes, David Hugh, "Insect Predation of oak acorns in the Cross Timber region of Texas," Tarleton State University, $12,000.00. (April 2009 - December 2009).

Sponsored Research

Harp, Randal (Principal), Lambert, Barry D. (Co-Principal), Kattes, David Hugh (Supporting), "Effects of Tassco on horn fly (Haematobia irritans) larval emergence and development in Manure," Sponsored by Acadian Agritech, Tarleton State University, $2,000.00.

Kattes, David Hugh, "Spatial and temporal distribution of mosquitoes at Proctor Lake," Sponsored by Tarleton State University, Tarleton State University, $10,000.00. (June 2004 - September 2004).

Intellectual Contributions in Submission

Books


Research in Progress

"Bermudagrass management in the Cross Timbers region of Texas" (On-Going)

"Comparing native and exotic grasses with different nitrogen sources for potential as sustainable forage system" (On-Going)

"Food Plot Preference by Deer in the Cross Timbers Region of Texas" (Writing Results)

"Gut loading calcium in field crickets for a food source for captive frogs" (Writing Results)

"Insecticide Resistance in House Fly, Musca domestica, Populations in Four Dairies in Central Texas, USA" (Writing Results)

"Insects Predation of Oak Acorns" (On-Going)

"Multi-location Evaluation of Prairie Acacia" (On-Going)

SERVICE

Department Service

Committee Chair, Genetics Professor Search committee.
Committee Member, Turfgrass Professor search committee.

Committee Chair, Institutional Effectiveness Assessment, Agronomy. (September 2007 - December 2007).

Committee Chair, Soil Scientist Search committee. (September 2005 - July 2007).

Committee Member, Institutional Effectiveness Assessment; College of Agriculture, MS Program. (September 2006 - December 2008).

Recruitment Seminar. (July 2003).

**College Service**

Committee Chair, Faculty Expectations. (October 2008 - Present).

Faculty Advisor, Tarleton Entomology Society. (September 2002 - Present).

Committee Member, NACTA crops judging contest. (September 2007 - April 18, 2008).

Entomology Contest Supervisor, Career Development Event. (March 2008).


Entomology Contest Supervisor, Career Development Event. (March 2007).


Entomology contest Supervisor, Career Development Event. (March 2006).

Entomology Contest Supervisor, Career Development Event. (March 2005).


Entomology Contest Supervisor, Career Development Event. (March 2004).


Entomology contest Supervisor, Career Development Event. (March 2003).

Soils Contest Assistant Superintendent, Career Development Event. (March 2003).

Entomology Contest Supervisor, Career Development Event. (March 2002).

Entomology Contest Supervisor, Career Development Events. (March 2001).

**University Service**

Committee Member, Convocations. (September 2005 - Present).
Committee Member, University Safety. (September 2002 - Present).
Committee Member, Academic Standards. (September 2001 - Present).
Guest Speaker, Brownwood 4H Nature in the Classroom. (May 2007).
Guest Speaker, Texas Electric Agricultural Teachers Seminar. (July 2006).
Guest Speaker, Cooper High School Science Dept.. (October 2003).
Committee Member, Faculty Senate. (September 2001 - August 2003).
Guest Speaker, TSU College of Science Annual Future Teacher Seminar. (July 2003).

**Professional Service**

Committee Member, SW Branch, Entomology Society of America, Awards Committee. (January 2009 - Present).

Committee Member, SW Branch, Entomology Society, Membership committee. (January 2009 - Present).

Committee Member, Southwestern Entomology Society of America, Linnaean Games Committee. (November 2008 - Present).

Editor, Journal Editor, Agricultural Consortium of Texas. (October 2004 - Present).

Committee Member, Education Foundation, Entomological society of America. (January 2008 - December 2008).

**Awards and Honors**

**Service, Professional**

Lifetime honorary membership, West Texas Golf Course Superintendents Association. (October 2008).
Name: Donald E. Keith

Area of Expertise/Interest

Marine Invertebrate Ecology and systematics
Freshwater Ecology

Education

Ph.D. Biological Sciences, University of Southern California, 1968
M.S. Biology, Texas Christian University, 1964
B.A. Geology and Biology, Texas Christian University, 1962

Professional Experience

1986-present Professor, Biological Sciences, Tarleton State University
1980-1986 Associate Professor, Biological Sciences, Tarleton State
1975-1980 Assistant Professor, Biological Sciences, Tarleton State
1968-1975 Assistant Professor, Biology, Texas Christian University


Current Active Research Projects

Occurrence and reproduction of the mud crab, *Rhithropanopeus harrisi* in Texas freshwater impoundments. There are currently two undergraduates working with me on mud crab research.

Research Grants (career)


2000-2001 - Organized Research Grant: $9,864. Introduction of the Estuarine Mud Crab *Rhithropanopeus harrisi* (Gould) into four Texas Reservoirs and its Potential to Spread to Other Freshwater Ecosystems.

1999-2000 - Organized Research Grant: $10,738.00 Introduction of the Estuarine Mud Crab *Rhithropanopeus harrisi* (Gould) into four Texas Reservoirs and its Potential to Spread to Other Freshwater Ecosystems. My research has attracted a great deal of attention around the state. Articles have been written about it in the Graham, Abilene, and Waco newspapers, as well as in

1998-1999 - Organized Research Grant: $7,700 for continuation of Bioassay by Metabolic Responses


1994-1996 - National Science Foundation Grant ($202,336 for 2 years). “Explorations in Environmental Science: An Intervention Program for Talented High School Students.” An educational program in environmental science funded through the National Science Foundation’s “Young Scholars Program”. The program was conducted by Drs. Riley Macon, Donald Keith, and Linda Schultz. The grant, awarded in 1994, was renewed in 1995. The program was originally developed by Drs. Virgil Lueth, Riley Macon, and Donald Keith.


1972-1974 - Funded by Texas Christian University Research Foundation. ($2,000). Biological Reconnaissance of the Swan Islands.

1972-1973 - TCU Research Foundation. ($3,500) - "Distribution of Sediments and Benthic Invertebrates in Nueces Bay, Texas, with emphasis on the Impact of Thermal Pollution.

1972 - TCU Research Foundation. ($1,300) - A Continuous-flow Respirometer for Aquatic Organisms

1970-1971 - Grant from Texas Electric Service Company ($33,109 for two years). With C.E. Murphy. Plankton and Benthic Invertebrates of Eagle Mountain and Possum Kingdom Lakes

1969-1971 - Grant from the U.S. Environmental Protection Agency. ($22,625 first year, $24,151 second year) with C. E. Murphy, L. W. Newland & J. Forsyth. Effects of Industrial Effluents on Trinity River Ecology

Research/Technical Publication Record

Refereed Journal Articles


Books and Book Chapters

1993 Contributions to Book on Coral Reefs: 2/15/93 Identified octocorals from underwater photographs for Dr. Harry Erhardt, Zoological Institute, Kassel University, Federal Republic of Germany.
Other Publications


Papers Presented at Professional Meetings

2001 The Introduction of the Estuarine Mud Crab *Rhithropanopeus harrisi* into three Texas Impoundments. Invited paper at the Symposium on Exotic Introductions in conjunction with the Texas Academy of Sciences meeting.

1990 Octocorals of Roatan, Honduras. Texas Academy of Science meeting at Southwest Texas State University.

1980 Brachyuran Crabs of Roatan, Honduras. Texas Academy of Science meeting at Corpus Christi State University.

1977 Brachyuran Crabs of the Swan Islands, Honduras. Texas Academy of Science meeting at Baylor University.

1976 Coral Reef Assemblages of the Swan Islands, Honduras. Texas Academy of Science meeting at Texas A&M University.

1975 A Continuous-Flow Respirometer for Comparative Respiratory Changes in Aquatic Organisms." Texas Academy of Science meeting at Sam Houston State University.


1974 Distribution of Benthic Invertebrates in Nueces Bay, with emphasis on the impact of thermal pollution. Texas Academy of Science meeting at the University of North Texas.
1974 Biological Reconnaissance of the Swan Islands. Texas Academy of Science meeting at the University of North Texas.

1973 Effects of Industrial Wastes on Trinity River Ecology. Texas Academy of Science meeting at the University of Houston.

**Student Scholarly Presentations and Posters Under My Direction – Last four years**

2007 Occurrence, Reproduction, and Genetics of the Estuarine Mud Crab *Rhithropanopeus harrisi* in Texas Freshwater Reservoirs. Presented at the Southwestern Association of Naturalists meeting in April by Mr. Terrence Boyle.

2006 Occurrence and Reproduction of the Estuarine Mud Crab, *Rhithropanopeus harrisi* in Texas Freshwater Reservoirs. Poster presented by Terrence Boyle under the direction Donald Keith at the Sigma Xi National Student Symposium in Seattle, Washington. The student received an “Award of Excellence”, a second place ribbon.


2003 Poster presentation and talk by Harvey Richey on the “Introduction of the Estuarine Crab *Rhithropanopeus harrisi* in Three Texas Impoundments” at the Texas A&M University System first annual Pathways Research Symposium at Texas A&M University at Galveston. D.E. Keith, faculty advisor

**Graduate Courses Currently Teaching**

- Environmental Biology (Biol. 520-3)
- The Aquatic Environment (Biol. 521-3)

**Graduate Students Completed**

2006 Terrence J. Boyle: M.S. Degree. I was major professor and thesis advisor. Thesis date 2006. Terrence is presently working toward a Ph.D at Texas A&M University. He is continuing his work on mud crabs and we are presently co-authoring a paper based on his thesis work.
2004 Harvey Richey: M.S. Degree. I was major professor and thesis advisor. Thesis date 2004. I do not know what Mr. Rickey is presently doing.

I have been thesis director of several students that later changed to a non-thesis route and graduated with an M.S. I have been on the advisory committee of numerous graduate students both thesis and non-thesis for the M.S. degrees in both Biology and Environmental Science. There are too many to enumerate.

**Other Pertinent Information**

**Book Reviews**


1994 Reviewed manuscript for McGraw-Hill, Inc. for a general biology textbook with an issues approach for the a non-majors biology course.

1992 Reviewed manuscript for a new textbook “An Introduction to Invertebrate Zoology” Systematics and Biological Classification and Introduction to the Metazoans


1983  Review of the last five Chapters of Starr and Taggart's general biology text. Later I was asked to review the revised draft because the author found my comment very helpful.

1982  Reviewed three chapters of a manuscript for a new oceanography textbook received by Wadsworth Publishing Co.

**Reviews for Journals**


**National Science Foundation Proposals Reviewed**


1989  NSF proposal reviewed. Decapod Crustaceans of California.

1988  NSF proposal reviewed. The Systematics of Coral reef Amphipoda (Crustacea: Anamixidae)


1986  NSF proposal reviewed. Allozymic Variation Crayfishes of the genus Orconectes.
1986  NSF (EPA) proposal reviewed. A Simple Continuous-Flow Toxicant Delivery System

1985  NSF proposal reviewed. Comparison of Evolutionary Patterns of Two Reef Corals (Montastrea, Porites) from the Caribbean and Mediterranean.

1985  NSF proposal reviewed. Caprellid Amphipods: Functional Morphology of the Second Gnathopods. (Proposal with the same name was also reviewed in 1984)


1978  NSF proposal reviewed. Studies of a group of External Parasitic Isopods (Genus Anilocra) of Fishes of the Tropical Western Atlantic.
Dr. Donald G. McGahan Ph.D.
Tarleton State University
Division: Academic Affairs: College of Agriculture and Human Sciences
Agribus, Agron, Hort, & Rng Mg
(254) 968-9701
Email: MCGAHAN@TARLETON.EDU

Education

Ph.D., University of California at Davis, 2007.
   Major: Soils and Biogeochemistry
   Dissertation Title: A Survey of Soils Formed on Serpentinitic Landscapes in California

MS, University of California at Davis, 2001.
   Major: Soil Science
   Dissertation Title: Mineralogical and chemical properties of agriculturally acidified soils in
   comparison with naturally acidic soils

BS, University of California at Davis, 1997.
   Major: Soil & Water Science

   Major: Mathematics - Physical Science

Faculty/Staff Rank

Starting Rank: Assistant Professor (August 16, 2008)
   Assistant Professor: August 16, 2008

Professional Memberships


Development Activities Attended

Conference Attendance, "Celebrating the International Year of Planet Earth," Soil Science
   Society of America (SSSA), American Society of Agronomy (ASA), Crop Science Society of
   America (CSSA), Geological Society of America (GSA), Gulf Coast Association of Geological
   Societies (GCAGS). (October 5, 2008 - October 9, 2008).

Conference Attendance, "86th Annual Meeting of the Pacific Division at Southern Oregon
   University," American Association for the Advancement of Science (AAAS) Pacific Division.
   (June 12, 2005 - June 16, 2005).
TEACHING

Teaching Experience

Tarleton State University
AGRN 301, Soils, 3 courses.
AGRN 312, Soil Morphology and Class, 1 course.
AGRN 420, Soil Fertility, 1 course.
AGRN 427, Soils and Environment, 1 course.
AGRN 440, Soil Physics, 1 course.
AGRN 488, Research Zinc and Soil, 1 course.
AGRN 527, Environmental Soil Sci, 1 course.
AGRN 530, Soil Phy Properties Mgmt, 1 course.
AGRN 586, Prob-Soil Fertility (420), 4 courses.
RNRM 486, Prob-Soil Science, 2 courses.

RESEARCH

Published Intellectual Contributions

Refereed Journal Articles


Presentations Given


McGahan, D. G. (Presenter & Author), Southard, R. J. (Author Only), Claassen, V. P. (Author Only), American Association for the Advancement of Science: Pacific Division, "Does Serpentinite Mineralogical Variation Affect Clay Mineralogy, Soil Mineralogical Class, and Ca:Mg Ratios?", American Association for the Advancement of Science: Pacific Division, Ashland, OR. (June 13, 2005).

Contracts, Grants and Sponsored Research

Contract

Wittle, Roger D. (Co-Principal), McGahan, Donald G (Co-Principal), "Interagency Cooperation Agreement," Sponsored by USDA-Natural Resource Conservation Service, Federal, $15,000.00. (September 1, 2008 - August 31, 2009).

Grant

Wittle, Roger D., Muir, James P (Principal), Lambert, Barry D. (Supporting), Mukhtar, Saqib (Co-Principal), McGahan, Donald G (Supporting), Harris, Bill (Co-Principal), "Developing and Demonstrating Effective Vegetative Filter Strips for Concentrated Feeding Operations in North Central Texas," Sponsored by TSSWCB-EPA 319h, State, $400,421.00.

McGahan, Donald G (Co-Principal), Brady, Jeff (Principal), Faske, Travis R (Supporting), Pontasch, Fran (Supporting), Mitchell, Forrest, Brady, Jack (Supporting), Muir, Jim (Supporting), Rathburn, Harold B (Supporting), "Plant nutrient effects on Xyella fastidiosa populations in Grapevine," Sponsored by USDA-APHIS, Federal, $136,385.00. (April 1, 2009 - March 31, 2010).

Research in Progress

"Comparing native and exotic grasses with different nitrogen sources for potential as sustainable forage system" (On-Going)

SERVICE

Professional Service

Dr. Allan D. Nelson  
Tarleton State University  
Division: Academic Affairs: College of Science and Technology  
Biological Sciences  
(254) 968-9158  
Email: NELSON@TARLETON.EDU

Education

Ph D, University of Oklahoma, 1994.  
Major: Botany  
Supporting Areas of Emphasis: Systematics  
Dissertation Title: Polyploid evolution in Chelone (Scrophulariaceae)

MST, Tarleton State University, 1988.  
Major: Biological Sciences

BS, Tarleton State University, 1984.  
Major: Agriculture Education  
Supporting Areas of Emphasis: Horticulture

Administrative Assignments

Department Chairperson, Department, June 1996 - August 1997.  
Responsibilities: Served as interim department chairperson for two summers at Texas A&M University Kingsville.

Professional Positions

Academic

Associate Professor, Tarleton State University. (January 2005 - Present).

Assistant Professor, Tarleton State University. (January 1998 - January 2005).

Assistant Professor, Texas A&M University Kingsville. (July 1995 - December 1997).

Assistant Professor, Northwestern Oklahoma State University. (August 1994 - June 1995).

Teaching Assistant, University of Oklahoma. (September 1990 - December 1994).


Other

Faculty/Staff Rank

Starting Rank: Assistant Professor (January 1998)  
Assistant Professor: January 1998  
Associate Professor: January 2005  
Tenure Decision: January 2005
Licensures and Certifications

Texas Teacher Certificate, State Board of Education. (November 30, 1989 - Present).
Texas Teacher Certificate, State Board Education. (November 30, 1989 - Present).
Texas Teacher Certificate, State Board Education. (November 30, 1987 - Present).
Texas Teacher Certificate, State Board Education. (May 13, 1984 - Present).

Professional Memberships

Texas Society of Mammalogists. (February 2008 - February 2009).
Botany Section Chair, Texas Academy of Science. (January 1998 - January 2008).
Secretary, TSU Sigma Xi Society, Sigma Xi. (January 1994 - January 2008).
Vice Secretary-Treasurer, Mid-continent Section, BSA, Botanical Society of America. (January 1992 - January 2008).

Development Activities Attended


Conference Attendance, "7th Annual Tarleton State University Student Research Symposium," Tarleton Chapter Sigma Xi. (October 2008).


Conference Attendance, "Fifth Annual TAMU System Pathways Student Research Symposium," Tarleton State University. (November 2007).

Conference Attendance, "8th Annual Tarleton State University Student Research Symposium," Tarleton Chapter Sigma Xi. (February 2007).


TEACHING

Tarleton State University
- BIOL 210, Essential Elements of Biology, 4 courses.
- BIOL 315, Plant Taxonomy, 2 courses.
- BIOL 470, Analysis of Biological Prin, 3 courses.
- BIOL 531, Conservation Biology, 2 courses.
- BIOL 586, Biological Problems, 3 courses.
- BIOL 588, Thesis, 1 course.

Directed Student Learning

Master's Thesis Committee Member, Other (Within Tarleton State University). Advised: Terry Johnson

Master's Thesis Committee Member, Other (Within Tarleton State University). Advised: Yvette Vaughn

Master's Thesis Committee Chair, "County records and range extensions of plants at Hunewell Ranch, Erath County, Texas," Other (Within Tarleton State University). (July 2008 - Present). Advised: Sara Harsley


Master's Thesis Committee Chair, "County records and range extensions of plants at Hunewell Ranch, Erath County, Texas," Other (Within Tarleton State University). (July 2007 - July 2008). Advised: Sara Harsley


RESEARCH
Published Intellectual Contributions

Refereed Journal Articles


Other

Nelson, A. D. (2006). *Review of the Department of Biological Sciences at Texas A&M University Texarkana ( (pp. 12 pp.). Texarkana:*


Presentations Given

Harsley, S. (Presenter & Author), Nelson, A. D. (Author Only), Sixth Annual TAMU System Pathways Student Research Symposium., "Notable range extensions and records of vascular plant species from Erath County, Texas.," TAMU, Commerce, TX. (November 7, 2008).

Harsley, S. (Presenter & Author), Nelson, A. D. (Author Only), Tarleton State University Student Research Symposium, "Notable range extensions and records of vascular plant species from Erath County, Texas.," Sigma XI, Stephenville, TX. (October 25, 2008).


Stasey, C. (Presenter & Author), Sudman, P. (Author Only), Nelson, A. D. (Author Only), Wittie, R. D. (Author Only), Southwestern Association of Naturalists, "Evaluation of Texas Kangaroo


Nelson, A. D. (Author Only), Brister, J. (Presenter & Author), 109th Annual Meeting of the Texas Academy of Science, "Soils, hydrology, vegetative ecology, and floristics of natural and constructed wetlands along the Leon River in the West Cross Timbers, Comanche Co., Texas.." Texas Academy of Science, Beaumont, TX. (March 2, 2006).

Media Contributions

Internet

Tarleton News Service. (May 6, 2008).

Tarleton News Service. (May 6, 2008).


Tarleton News Service. (September 15, 2006).

Tarleton News Service. (September 6, 2006).

Contracts, Grants and Sponsored Research

Grant

Nelson, Allan Dale (Principal), "Assessment of genetic diversity in the state-threatened Texas kangaroo rat (Dipodomys elator) using amplified fragment length polymorphisms (AFLP) and microsatellite DNA," Sponsored by Texas Parks and Wildlife Department., State, $148,942.00.


Nelson, Allan Dale (Principal), "Genetic diversity and taxonomic relationships of dehydrin genes in wild and cultivated peanuts.," Sponsored by Texas Higher Education Coordinating Board. Advance Research Program (ARP) Biological Sciences-Molecular Biology and Genetics., State, $90,000.00.

Pfau, Russell S. (Co-Principal), Sudman, Philip D (Principal), Rathburn, Harold B (Co-Principal), Bertis, Little (Co-Principal), Nelson, Allan Dale (Co-Principal), "Acquisition of an Automated DNA Analysis System for Biology Teaching and Research," Sponsored by National Science Foundation, Federal, $99,677.00. (1999 - Present).

Nelson, Allan Dale (Principal), "Assessing genetic diversity in a state-threatened Texas kangaroo rat," Sponsored by University Research Committee, Tarleton State University, Tarleton State University, $10,000.00. (September 2007 - August 2008).

Research in Progress

"Ecology Texas kangaroo rat" (On-Going)
Ecology of state threatened mammal

"Flora Erath County" (On-Going)
Document all native or naturalized plants occur in county.

"Genetics Texas Kangaroo Rat" (On-Going)
AFLP and sequence analysis of this state threatened mammal.

SERVICE

Department Service

Committee Member, Environmental Science Program review. (October 2008 - Present).

Committee Chair, Texas Collaborative for Excellence in Teacher Preparation (TxCETP).. (January 2006 - Present).

College Service

Committee Member, Western Metroplex P-16 Council.. (January 2008 - Present).

University Service

Committee Member, Benefits Committee.. (January 2006 - Present).

Committee Member, Teacher Education Council.. (January 2006 - Present).

Professional Service

Chapter Sponsor, National Science Teachers Association Student Chapter, Stephenville, Texas. (January 2008 - Present).

Committee Member, Sigma Xi Membership Admissions Committee, Stephenville, Texas. (January 2008 - Present).

Program Organizer, Science Olympiad Event Coordinator.. (January 2006 - Present).

Organization sponsor, Tarleton Alpha Chi Sponsor, Stephenville, Texas. (January 2006 - Present).

Curate plant collection of 4000 specimens, Tarleton State University Herbarium Curator, Stephenville, Texas. (January 2006 - Present).
Reviewer, Journal Article, Texas Academy of Science, Texas. (January 2006 - Present).

Program Coordinator, University Interscholastic League, Practice Science Contest Coordinator, Stephenville, Texas. (January 2006 - Present).

Program Coordinator, University Interscholastic League, Regional Science Contest Coordinator, Stephenville, Texas. (January 2006 - Present).


Committee Member, Southwestern Association of Naturalists, Stephenville, Texas. (January 2007 - December 2008).


Officer, Secretary, Tarleton State University (TSU) Sigma XI Society, Stephenville, TX. (January 2006 - January 2007).


Public Service

Member, Friends of Library, Stephenville, Texas. (January 2008 - Present).

Member, Stephenville Band Fans, Stephenville, Texas. (January 2006 - Present).

Display for park visitor center, Copper Break State Park, Quanah, Texas. (January 2007 - December 2007).


Consulting

Academic, Texas A&M University Texarkana, Texarkana, Texas. (January 2006 - April 2006).


Awards and Honors

Service, University

Award for enthusiastic and dedicated faculty member, Life Science Club, Texas A&M University Kingsville. (December 1997).
Name: Russell S. Pfau

Area of Expertise/Interest: Population/Evolutionary Genetics

Education: PhD, Oklahoma State University, 2000; MS & BS, Midwestern State University, 1994 & 1992

Professional Experience: faculty member at Tarleton State University (2000-present); adjunct instructor at Oklahoma State University Oklahoma City (2000)

Current Active Research Projects: analysis of a hybrid zone in the cotton rat (Sigmodon hispidus); analysis of a hybrid zone in shrews (Blarina) phylogeography of the Texas mouse (Peromyscus attwateri); evolution of a gamete-compatibility gene (ZP3) in the cotton rat; population genetics of two species of bat


Research/Technical Publication Record

Refereed Journal Articles:

**Papers and Posters Presented at Professional Meetings**

(Individuals indicated by a 'U' or 'G' are Tarleton undergraduate or graduate students respectively who conducted research under my guidance. The first person listed gave the presentation.)

**2007**

*American Society of Mammalogists annual conference*
- Carson M. Brown¹, Loren K. Ammerman¹, Rodrigo A. Medellín², Arnulfo Moreno-Valdez³, and Russell S. Pfau — Genetic Variation in the Endangered Mexican Long-Nosed Bat (*Leptonycteris nivalis*). ¹Angelo State University, ²Universidad Nacional Autónoma de México, ³Universidad Tecnológica de Ciudad Victoria.

*International Bat Research Conference and North American Symposium on Bat Research*
- Carson M. Brown¹, Loren K. Ammerman¹, Rodrigo A. Medellín², Arnulfo Moreno-Valdez³, and Russell S. Pfau — Genetic variation and structure in the endangered Mexican long-nosed bat (*Leptonycteris nivalis*): mitochondrial and nuclear perspectives. ¹Angelo State University, ²Universidad Nacional Autónoma de México, ³Universidad Tecnológica de Ciudad Victoria.

**2006**

*Texas Society of Mammalogists Annual Conference*
- Terry JohnsonG, Russell Pfau, and Gregory Wilson — Population genetics of the Texas mouse (*Peromyscus attwateri*). (Wilson is a faculty member at University of Central Oklahoma)
- Calvin HenardU, Russell Pfau — Hybridization between two divergent lineages of cotton rats in Texas: a mitochondrial DNA perspective

**2005**

*Texas A&M University System Pathways Research Symposium*
- Calvin HenardU, Russell Pfau — Hybridization between two divergent lineages of cotton rats in Texas: a mitochondrial DNA perspective (Henard received second place with this poster presentation)

*American Society of Mammalogists Annual Conference*
- Caleb PhillipsG and Russell Pfau - A genetic discontinuity exists within Sigmodon hispidus in the United States: another cryptic species?
member at the University of Central Oklahoma; Hall and Mushegian are his undergraduate students)

Southwestern Association of Naturalists Annual Conference
- Caleb Phillips and Russell Pfau - A genetic discontinuity exists within Sigmodon hispidus in the United States: another cryptic species?
- Gregory Wilson, Brennen Hall, Vagan Mushegian, Terry Johnson, and Russell Pfau. Patterns of mitochondrial DNA variation in populations of the Texas mouse, Peromyscus attwateri, in North America. (Wilson is a faculty member at the University of Central Oklahoma; Hall and Mushegian are his undergraduate students)

Texas Society of Mammalogists Annual Conference

Tarleton Student Research Symposium
- Terry Johnson and Russell Pfau – Population genetics of the Texas mouse, Peromyscus attwateri, in Texas and Oklahoma.
- Caleb Phillips and Russell Pfau – A genetic discontinuity exists within Sigmodon hispidus in the United States: another cryptic species?
- Sara Harsley, Kim Harwell, Jennifer Linkenauger, Ryan Rogers, Sunni Taylor, Holly Warren, Ileana Zea, J’Nae Zauschka, and Russell Pfau – An interactive meiosis exercise using swim noodles as chromosomes. (These are undergraduate student members of the Tarleton Student Chapter of the National Science Teachers Association)
- Calvin Henard and Russell Pfau – Cryptic species of the cotton rat in Texas: a mitochondrial DNA perspective.

Tri-Beta Annual Conference
- Christina Dobson and Russell Pfau - Extraction and Sequencing of DNA from Museum Skulls.

2004
Texas A&M University System Pathways Research Symposium
- Caleb Phillips and Russell Pfau - Genome-wide genetic diversity of Sigmodon hispidus,

Tri-Beta Annual Conference
- Lin Winton, Russell Pfau, and Adam Richman - Genetic diversity of island and mainland populations of Peromyscus maniculatus. (Richman is a faculty member at Montana State University)

Texas Society of Mammalogists Annual Conference
- Caleb Phillips and Russell Pfau - Genome-wide genetic diversity of Sigmodon hispidus
- Lin Winton, Russell Pfau, and Adam Richman - Genetic diversity of island and mainland populations of Peromyscus maniculatus, (Richman is a faculty member at Montana State University)
- Terry Johnson, Caleb Phillips, Russell Pfau, and Adam Richman - Use of amplified fragment length polymorphism analysis to compare genetic diversity of island-mainland population pairs of Peromyscus maniculatus.
- Kristin Denton and Russell Pfau - Differences in patterns of nucleotide substitution at an immune response gene in two species of Peromyscus.

Graduate Students Completed:

Caleb Phillips, M.S., AFLP analysis reveals patterns of divergence and hybridization in the cotton rat, Sigmodon hispidus. 2006. I served as major professor. Caleb is currently pursuing a PhD at Purdue University.

Kristin Denton, M.S., Sequence diversity of an immune response gene (MHC-DQA) in two closely-related species of Peromyscus. 2006. I served as major professor. Kristin is currently a laboratory technician.

Involvement in Collaborative Projects as Member of Research Team: I have collaborated or am currently collaborating with researchers at several other institutions. Collaborators include Dr. Adam Richman at Montana State University, Drs. Steve Hoofer, Robert Baker, and Robert Bradley at Texas Tech University, Dr. Gregory Wilson at University of Central Oklahoma, Dr. Loren Ammerman at Angelo State University, and Dr. Elmer Finck at Fort Hays State University.
Name: Harold Rathbum

Area of Expertise/Interest
Biochemistry/ Molecular Biology

Education
Midwestern State University B.S. 1981 Biology
Kansas State University Ph. D. 1989 Biochemistry

Professional Experience
Associate Professor, Dept of Biological Sciences, TSU, 2003-present
Assistant Professor, Dept of Biological Sciences, TSU, 1996-2003
Adjunct Assistant Professor/Post Doctorate Research Associate, Dept of
Botany & Microbiology, University of Oklahoma, 1992-1995
Research Microbiologist, USDA, Beltsville, MD, 1989-1992

Current Active Research Projects
1. Isolation and Characterization of a Trypsin Inhibitor from Sesbania vesicaria. This project is supported by a Departmental Grant from the Robert A. Welch Foundation.

2. Detection of Dehydrin Genes in Peanuts and Fescue.

3. Understanding the Molecular Interactions of Pierce's Disease in Grapes.

Research Grants (career)
1. Title: Construction of a Recombinant Baculovirus for the Expression of a Barley (Hordeum vulgare) Leaf Thionin Gene and for the Biological Control of Lepidopteran Pests
Program: Organized Research Committee, Tarleton State University
Date Submitted: Oct. 1996
Amount Requested: $14,689.00
Amount Funded: $15,119.00

2. Title: PCR Derived Constructs of a Barley Leaf Thionin Gene and Expression in a Baculovirus
Program: Organized Research Committee, Tarleton State University
Date Submitted: Oct, 1997
Amount Requested: $15,530.25
Amount Funded: $10,871

3. Title: PCR Derived Constructs of a Barley Leaf Thionin Gene and Expression in a Baculovirus
Program: Organized Research Committee, Tarleton State University
Date Submitted: Oct, 1998
Amount Requested: $13,165.25
Amount Funded: $7,500

4. Title: Departmental Grant
   Program: Departmental Grant Program, The Robert A. Welch Foundation
   Funding Period: June, 1999 to May, 2001
   Amount Requested: $105,000
   Amount Funded: $105,000

5. Screening Wild Plants and related Hay Crops for Drought Resistant Genes
   Funding Agency: Amy Shelton McNutt Charitable Trust
   Funding Period: January 2000 to December 2001
   Amount Requested: $25,000
   Amount Funded: $27,000

6. Title: PCR Derived Constructs of a Barley Leaf Thionin Gene and Expression in a Baculovirus
   Program: Organized Research Committee, Tarleton State University
   Date Submitted: Oct, 1999
   Amount Requested: $9,366.62
   Amount Funded: $8,897

7. Title: Acquisition of an Automated DNA Analysis System for Biology Teaching and Research
   Program: Major Research Instrumentation Program, NSF
   Date Submitted: Feb 7, 2001
   Amount Requested: $99,800
   Amount Funded: $99,677

8. Title: Assessment of Dehydhrins in Peanuts
   Program: Organized Research Committee, Tarleton State University
   Date Submitted: Oct, 2001
   Funding Period: January, 2002 to August, 2002
   Amount Requested: $11,995
   Amount Funded: $11,995

9. Title: Departmental Grant
   Program: Departmental Grant Program, The Robert A. Welch Foundation
   Funding Period: June, 2002 to May, 2005
   Date Submitted: September, 2001
   Amount Requested: $105,000
   Amount Funded: $105,000

10. Title: Departmental Grant
Program: Departmental Grant Program, The Robert A. Welch Foundation
Funding Period: June, 2008 to May, 2011
Date Submitted: September, 2007
Amount Requested: $105,000
Amount Funded: Pending

Research/Technical Publication Record

Refereed Journal Articles


Other Publications

US Patents:

**Papers Presented at Professional Meetings**


**Posters at Professional Meetings**


*Vickers, J., RATHBURN, H. and Konvicka, J. J. Isolation and Characterization of Hospital Bacterial Isolates from Stethoscopes. Southcentral Region Meeting of Beta Beta Beta, Oklahoma Biological Field Station, April 5, 1997.*

*Won the Frank G. Brooks Award for Excellence in Student Research*

Journey J, Walter M, and RATHBURN, H. Inhibition of Trypsin by Mustang Grape Extract. South Central Regional Convention of Beta Beta Beta, Districts I and II, University of Oklahoma Biological Field Station, April 3-5, 1998.


Melissa Cather, Corrie Williams, Zac House, Brian Kanz, and Harold Rathburn. Development of a Purification Scheme for a Trypsin Inhibitor from a Native Texas Legume. 34th Annual Meeting of the Dallas-Fort Worth Section of the American Chemical Society, April 20, 2001, Tarleton State University, Stephenville, Texas.


Graduate Courses Currently Teaching

Biol 5993
Biol 5093
Biol 5303

Graduate Students Completed

1. Rex Gamble
   Graduated: May 1998
   Degree: Master’s in Environmental Geology (non-thesis)
   Immediate Post Graduation: Employed at Tarleton State University
   Current status: Employed at Tarleton State University

2. Mark Samuels
   Graduated: Aug 1998
   Degree: Master’s in Biology (non-thesis)
   Immediate Post Graduation: Entered Texas Tech University Medical School
   Current status: Unknown,

3. Barry Lambert (chair)
   Graduated: Dec, 1998
   Degree: Master’s in Biology (thesis title: The Addition of Phytase to the Diet of Holstein Calves: Effects on the Utilization of Phosphorus from Phytate)
   Immediate Post Graduation: Enrolled in PhD program and earned PhD at Kansas State University, Dept of Animal Science,
   Current status: Employed at Tarleton State University

4. Jeff Brady (chair)
   Graduated: Dec, 1998
   Degree: Master’s in Biology (thesis title: Expression of Barley Thionin Gene Constructs in a Prokaryotic System
   Immediate Post Graduation: Enrolled in PhD program and earned PhD at Texas A&M University.
   Current status: Employed at Texas A&M University Research & Experiment
Station, Stephenville, Texas

5. Adam Luck singer
   Graduated: May, 1999
   Degree: Master's in Biology (non-thesis)
   Immediate Post Graduation and Current status: Unknown

6. Tony Reeves (chair)
   Graduated: Aug 1999
   Degree: Master's in Biology (thesis title: Construction of a Recombinant
   Baculovirus Containing a Cytotoxic Gene from Barley (Hordeum vulgare).
   Immediate Post Graduation: Enrolled in PhD program and earned PhD at Texas
   A&M University, Dept of Biochemistry & Biophysics.
   Current status: Employed by US Army

7. Harley Naumann
   Graduated: 1999
   Degree: Master's in Biology (thesis title: The Incidence of Occurrence of
   Enterohemorrhagic Escherichia coli in Holstein Cattle for Slaughter
   Immediate Post Graduation and Current status: Unknown.

8. Renee Johnson (chair)
   Graduated: Did not graduate
   Degree sought: Master's in Biology (thesis)
   Immediate Post Graduation and Current status: Unknown

9. Bobbie Pemberton
   Graduated: December 2000
   Degree: Master's in Biology (non-thesis)
   Immediate Post Graduation and Current status: Unknown

10. Shyam Shridhar (chair)
    Graduated: May 2003
        Degree: Master's in Biology (non-thesis)
        Immediate Post Graduation and Current status: Unknown

11. Phillip Carter Rosson
    Graduated: May 2005
        Degree: Master's in Biology (non-thesis)
        Immediate Post Graduation: Employed by Home Dept
        Current status: Unknown

12. Justin Markley (chair)
    Graduated: August 2005
        Degree: Master's in Biology (non-thesis)
        Immediate Post Graduation: Unknown
Current status: Enrolled at Texas A&M University--Kingsville, Pharmacy School

13. Caleb Phillips
Graduated: December 2005
Degree: Master’s in Biology (thesis title: Immediate Post Graduation and Current status: Enrolled in the PhD program at Purdue University

14. Kristen Denton
Graduated: May 2006
Degree: Master’s in Biology (thesis title: Sequence Diversity of an Immune Response Gene (MHC-DQA) in Two Closely Related Species of Peromyscus)
Immediate Post Graduation and Current status: Unknown

15. Brandy Musick
Graduated: December 2006
Degree: Master’s in Biology (non-thesis)
Immediate Post Graduation and Current status: Teaching biology at Stephenville HS

**Involvement in Collaborative Projects as Member of Research Team**

1. I collaborated with Dr. Manfred Reinicke, Dept of Chemistry, TCU, on a project to identify insecticidal compounds in plants native to China, Bolivia, and Mexico. Undergraduates often participated in this project, and many leads were identified.

2. Presently I am collaborating with Dr Forrest Mitchell and Dr Jeff Brady, Texas A&M University Research & Experiment Station, on two projects. The first is to identify and characterize the molecular interactions regarding Pierce's diseases of grapes. Currently two graduate students and one undergraduate student are working on different aspects of this disease.

The second project is to identify the genetic information of dehydrins in peanuts and fescue. Not only does this project involve Drs Mitchell and Brady, but Dr Dariusz Malinowski, Texas A&M University Research & Experiment Station, is a collaborator.
Name: Dr. Max G. Sanderford

Area of Expertise
Neural and humoral control of the cardiovascular system with developing interest in the regulation of energy balance.

Degrees

Doctor of Philosophy
Physiology (1999)
University of Texas Health Science Center at San Antonio
San Antonio, Texas

Dissertation: Mechanisms of acute modulation of arterial baroreflex function by peripheral angiotensin II (under the direction of Vernon S. Bishop, PhD)

Master of Science
Biology (1992)
Baylor University
Waco, Texas

Thesis: Effect of pinealectomy on lifespan in male, BALB-C mice (under the direction of F. Ray Wilson, PhD)

Bachelor of Science
Biology (1989)
Baylor University
Waco, Texas

Professional Experience

Associate Professor
Department of Biological Sciences
Tarleton State University
Stephenville, Texas (9/06 – present)

Assistant Professor
Department of Biological Sciences
Tarleton State University
Stephenville, Texas (9/99 – 8/06)

Graduate Assistant
Department of Physiology
University of Texas Health Science Center at San Antonio
San Antonio, Texas (9/92 – 5/99)

Graduate Teaching Assistant
Department of Biological Sciences  
Baylor University  
Waco, Texas (1/90 – 8/92)

Teaching

Courses

Animal Physiology I (lecture and laboratory)
Animal Physiology II (lecture and laboratory)
Human Anatomy and Physiology I (lecture and laboratory)
Human Anatomy and Physiology II (lecture and laboratory)
Histology (lecture and laboratory)
General Biology with Animal Emphasis
General Biology with Cell and Plant Emphasis
Physiology (selected lectures for occupational therapy students)
Physiology Laboratory

Graduate Committees


Nichole Cherry (2006), Master of Science (thesis committee member): Using the mobile nylon bag technique to determine phosphorus disappearance in common dairy cattle ration ingredients.

Brandy Musik (2006), Master of Science (nonthesis; committee member)


Aubrey Hitt (2005), Master of Science (nonthesis; committee member)

Scholarship

Contributions to books

**Refereed Journal Articles**


**Articles in Progress**

Lambert, B.D., Dobson C.M., Cherry, N.M., Woodworth, J.C., and M. G. Sanderford. Chemical Form of Dietary L-Carnitine Affects Plasma But Not Tissue Carnitine Concentrations in Male Sprague-Dawley Rats. (Submitted to the Journal of Animal Physiology and Animal Nutrition)

Squyres, J.D. and M.G. Sanderford. Effects of 17-Beta estradiol replacement on chronic angiotensin II-induced hypertension in ovariectomized rats (In progress)

**Abstracts:**


Snyder, BA and MG Sanderford. Estradiol reduces blood pressure in angiotensin-II dependent hypertension. Beta Beta Beta National Biological Honor Society South-Central Regional Convention, April, 2003


Presentations


Invited lecture. Baylor University, Department of Biological Sciences, Waco, TX. 2001

Invited lecture. Howard Payne University, Department of Biology, Brownwood, TX. 2004

Invited lecture. University of North Texas Health Science Center, Department of Integrative Physiology, Fort Worth, TX. 2004

Support

External Support (funded)


External Support (not funded)

Texas Higher Education Coordinating Board – Advanced Research Project (ARP). 2006 (principal investigator) Project title: Hormones and Hypertension: The Role of Estradiol. ($100,000)


Texas Higher Education Coordinating Board – Advanced Research Project (ARP). 2001 (principal investigator) Project title: Hypothalamic Opioid Feedback in Angiotensin-Dependent Hypertension. ($150,000)

National Science Foundation (NSF). 2000. (coinvestigator) Project Title: Research and Inquiry in Science Education. ($296,954)
Internal Support

Tarleton State University Organized Research Grant. 2006. (principal Investigator) Project Title: Gender differences in the thermoregulatory threshold for non-shivering thermogenesis. ($9,160)

Tarleton State University Organized Research Grant. 2004. (principal Investigator) Project Title: Autonomic Dysreflexia and Exercise. ($12,900)

Tarleton State University Organized Research Grant. 2003. (principal investigator) Project Title: Dietary Phytoestrogens and Hypertension. ($7,045)

Tarleton State University Organized Research Grant. 2001. (principal investigator) Project Title: Central Mechanisms of Gender Differences in Deoxycorticosterone -Salt Hypertension. ($7,900)

Service

Professional Affiliations

American Physiological Society (APS; 2005 – present)

Sigma Xi (2006 – present)

Texas Association of Advisors for the Health Professions (TAAHP; 2006-present)

American Physiological Society Student Member (1994-1999)

Society for Neuroscience Student Member (1994-1998)

Professional Service

National American Heart Association Cardiovascular Regulation Study Section (2002-2004)


University Service

Institutional Review Board Subcommittee for Laboratory Animal Use (2000-present)

Academic Computer Services Committee (2000-present)

Speaker Symposium Committee (2001-present)

Faculty advisor for Alpha Phi Omega (2000-2001)
College Service

Convocation Committee (2002-present)
Advisor to the Joint Admission Medical Program (2003-present)
Advisor to the Partnership for Primary Care (2003-present)
Academic Appeals Committee (2003-present)

Departmental Service

Beta Beta Beta Biological Honor Society faculty advisor (2003-present)
Faculty Senate, departmental representative (2005-present)
Committee on Graduate Students Student member. UT Health Science Center (1996)

Community Service

Harris Methodist-Erath County Hospital Community Health Council (2005-present)
Science Olympiad Event Coordinator for “Health Science” and “Science of Fitness” (2004-present)
Girl Scout Badge Day Event Coordinator for “My Body” (2002-2006)

Honors and Awards

Who’s Who Among America’s Teachers (2005)
Omicron Delta Kappa Teacher of the Month (2003)
Documentation of Factors in Support of a Tarleton PhD Program
Emphasizing Environmental Aspects of Agriculture
(Survey of COAHS, COST, TIAER, CAE, AREC)

FACULTY CREDENTIALS/QUALIFICATIONS
(provide data for each individual faculty/professional staff member who will be directly contributing to PhD program, either through research, teaching, graduate committee involvement, or all of these)

Name
Charles E. Simpson

Area of Expertise/Interest
Peanut Breeding and Germplasm Utilization

Education
Texas A&M University  B.S. in Agricultural Education, 1963
Texas A&M University  M.S. in Plant Breeding & Cytogenetics, 1966
Texas A&M University  Ph.D. in Plant Breeding & Cytogenetics, 1967

Professional Experience
2003-Present: Professor Emeritus, Texas Agricultural Experiment Station
2001-Present  Adjunct Professor, Tarleton State University
1979-Present: Graduate Faculty, Texas A&M University
1984-2003:  Professor, Texas Agricultural Experiment Station
1975-1984:  Associate Professor, Texas Agricultural Experiment Station
1967-1975:  Assistant Professor, Texas Agricultural Experiment Station

Current Active Research Projects
My current TAES project is a Hatch project, H-6763, entitled: “Enhancement of Arachis germplasm to improve Peanut (Arachis hypogaea L.) cultivars.” Under the umbrella of this project I can list eight different grant funded projects, two thesis projects, and approximately twenty projects that are funded by TAES or myself, some of which we are currently seeking funding to support. We are currently (9-10-09) preparing proposals to various agencies, grower groups, and commercial companies for a total of six to nine projects or project renewals.

Research/Technical Publication Record

Refereed Journal Articles

Research Grants (career)
Outside funding has been obtained on more than 185 different proposals for a total of $6,693,317 with $2,481,767 being for local use at Stephenville.
In-house special funding has amounted to more than $503,900 in numerous projects up to $40,000 each.
89 refereed Journal articles published

**Books and Book Chapters**
10 book chapters authored or coauthored

**Other Peer-Reviewed Publications**
None

**Other Publications**
167 non-refereed and trade journal publications

**Papers Presented at Professional Meetings**
116 papers presented at state, national and international professional meetings. (23 of these invited, remaining volunteered).

**Posters at Professional Meetings**
1

**Graduate Courses Currently Teaching**
None

**Graduate Students Completed**

Mr. Ross J. Peters - Soil and Crop Sciences Department. MS Degree 1980. (Co-chair) Returned to Israel upon graduation. Present location unknown.


Mr. Komi Sewonou, Master of Science Degree 1982. (Committee member.) Title of Thesis, "A Study of Resistance to Sclerotium rolfsii Sacc. in Peanut Introduction PI 365553 Progenies. Soil and Crop Sciences Department, Texas A&M University, College Station, TX 77843 USA. Present location unknown.

Mr. Turner E. Callaway, 1986 (Committee member.) - Soil and Crop Sciences Dept. (Never did finish MS degree). Present location unknown.

Ms. Greta Schuster, 1987. (co-chair). Department of Plant Pathology and Microbiology (Never did finish MS degree) Changed departments and committee finished MS and PhD and currently on faculty at West Texas A&M University.

Mr. Scot C. Nelson 1988). (Co-chair) Master of Science degree. Title of thesis, "Resistance and susceptibility to Meloidogyne arenaria in exotic Arachis germplasm." pp-63. Soil and Crop Science Department, Texas A&M University, College Station, TX 77843. USA. Mr. Nelson continued graduate studies, received PhD and currently is on faculty of University of Hawaii.

Mr. Mahama Ouedraogo. 1990. Master of Science Degree. (Committee member.) Title of thesis, “Yield, grade, and leafspot reaction of interspecific derived peanut lines.” pp- 95. Soil and Crop Science Department, Texas A&M University. College Station, TX 77843. USA. Student returned to Burkina Faso to his teaching position on the faculty of University of Ouagadougou. Later he returned to complete a PhD; see below.


Ms. Yolanda Lopez. 1994. Master of Science degree. (Committee member.) Title of thesis, “A comparison of Tamspan 90 peanut component lines for Aflatoxin production.” 72 pp. Soil and Crop Science Department. Texas A&M University. College Station, TX 77843. USA. Continued graduate studies for a PhD; see below.

Mr. Jason J. Goldman 1994. Master of Science degree. (Co-chair) Thesis title, “An analysis of progress in breeding sclerotinia blight resistant runner-type peanut.” 39 pp. Soil and Crop Science Department. Texas A&M University, College Station, TX 77843. USA. Continued graduate studies, received a PhD. and currently works for the USDA-ARS as a research scientist.

Dr. Mahama Ouedraogo 1995. Doctor of Philosophy. (Committee member.) Dissertation title, “Yield and Leafspot response of interspecific peanut crosses in early generation tests.” pp-187. Soil & Crop Sciences Department. Texas A&M University, College Station, TX 77843. USA. Dr. Ouedraogo is currently Professor on faculty of University of Ouagadougou

Dr. Shim, M.-Y. 1996. Doctor of Philosophy. (Committee member) Title of dissertation, “The study of PCNB-tolerance in Sclerotium rolfsii, and the effect of soil pH on sclerotial germination and pathogenicity.” pp 87. Texas A&M University, College Station, TX 77843. USA. Returned to home country, but current location unknown.


hypogaea L.): Inheritance and a search for molecular polymorphism.” 167 pp. Texas A&M University, College Station, TX 77843. USA. Worked with our research team for several years, but currently is teaching science in a Public School in Texas.

Dr. Ousmane Ndoye. 2001. Doctor of Philosophy. (co-chair) Dissertation title, “Inheritance of fresh seed dormancy among crosses of Spanish type peanut (Arachis hypogaea L.).” ???pp. Texas A&M University, College Station, Texas 77843. USA. Returned to home country of Senegal and is currently the Research Leader for Peanut Breeding Research in the country of Senegal.


Dr. Gregory T. Church. 2002. Doctor of Philosophy. Title of dissertation. “Resistance to Meloidogyne arenaria in Peanut Gene Identification and Molecular Markers. 85 pp. Texas A&M University, College Station, TX 77843. USA. Currently assistant research scientist at the Chillicothe Research Station, part of the TAMU REC at Vernon, TX.

Mr. Michael Faries. 2003. Master of Science degree. (co-chair.) Thesis title, “Cross-compatibility of new Bolivian material with existing A and B genome progenitors of Arachis hypogaea L.” Agriculture and Life Sciences. Tarleton State University, Stephenville, TX 76401. (Degree May 2003). Was an unusual circumstance in that Mr. Faries could never get his thesis finished so, without my knowledge, convinced the TSU co-chair to allow him to graduate without the thesis because he had enough hours to do so. Currently Mr. Faries is a Research Associate in the Horticulture Department at TAMU in College Station, in charge of the field operations of the vegetable breeding program.

Mr. Michael R. Baring. 2006 Master of Science degree in Soil and Crop Sciences Dept. TAMU (co-chair). Thesis title: Selection of a multiple disease resistant runner type peanut. Currently Mr. Baring is Assistant Research Scienist in Soil & Crop Sciences Dept. TAMU, in charge of the South Texas part of the Texas Peanut Breeding Program.

Mr. Shyam Shridhar - Biological Sciences Tarleton State Univ. (Committee member.) (MS Degree anticipated Dec. 2005) Completion date and present location unknown.


Mr. Nicholas N. Denwar. PhD. (Committee member.) Plant & Soil Sciences Dept. Texas Tech University. Student in his fifth year, September 2009.

Refereed Journal Articles published

1) Refereed Journal Publications before 1984


*Submitted to Peanut Science first, but rejected so submitted to Crop Science.

2) Refereed Journal Articles since 1984 Promotion to Full Professor


Arachis L (Leguminosae) from Brazil, Paraguay, and Bolivia. Bonplandia 14:35-64.
Bonplandia 14:41-42.


Bonplandia 14:44-45.


Total 89 (11 before Full Professor, 78 after promotion)

Involvement in Collaborative Projects as Member of Research Team
I retired (semi) in 2003. In the year preceding retirement I counted 43 different scientists whom I was collaborating with in eight different countries on four different continents. At present I consider myself as member of nine teams doing collaborative research on three continents, in seven different countries.

Other Pertinent Information
1. Co-translated a book on Peanut Taxonomy from Spanish to English
2. Co-leader on plant exploration teams on 25 expeditions to South America to collect wild and cultivated landraces of peanut.
3. Maintain, evaluate and utilize one of most complete wild peanut collections in the world.
4. Leader of first research team to release a new peanut variety with a gene transferred from a wild peanut.
5. Registered 16 peanut varieties in CROP SCIENCE.
6. Released, with colleagues, 14 new peanut varieties and 7 germplasm lines

RESEARCH INFRASTRUCTURE

(University-wide considerations, i.e., university research budget, information technology, physical structures, laboratory capabilities, library resources, support programs, other doctoral programs, advisory boards, etc., will be a part of final documentation. Colleges/units being surveyed are asked to provide data for that entity only.)

Physical Facilities (both indoor and outdoor)
Three offices for me and staff -- 480 sq.ft.
Cytogenetic lab and store room – 600 sq.ft.
Six greenhouses – 9,480 sq.ft.
Peanut processing building – 3,800 sq.ft.
Peanut drying building – 3,200 sq.ft.
Cold storage for seed storage – 1,400 cu.ft.
Three old field pickup trucks
Three plot tractors access to three field tractors and equipment.
Two plot planters
Peanut related production equipment
Peanut plot thresher
Peanut grading equipment.
Irrigation pipe for solid set irrigation of peanut plot land
28 acres of peanut plot land
Various tools, machines, equipment for conducting field plot research.

Specialized Research Equipment
Phase contrast microscope
Regular light microscope
5 dissecting scopes
Computer network, barcode reader and related software and hardware for collection of data into data base.
Seed germinator
Seven different scientific scales, some of which are tied into the data base mentioned above.

GRADUATE ASSISTANTSHIPS/SCHOLARSHIPS AND OTHER GRADUATE SUPPORT AVAILABILITY
This will be dependent upon obtaining grants that include graduate student training, however, this may become an issue because a significant emphasis has been placed on securing grants in AgriLife Research that put graduate students AT TEXAS A&M UNIVERSITY.
Name: Philip Dean Sudman

Area of Expertise/Interest: Genetics, population-evolutionary ecology, biogeography.

Education
B.A. in Biology, Central University of Iowa, Pella, Iowa, May 1983.
M.S. in Biology, Fort Hays State University, Hays, Kansas, December 1985.
Ph.D. in Zoology, Texas A&M University, College Station, Texas, August 1989. Dissertation title: "Meiotic behavior of chromosomal polymorphisms in populations of the deer mouse (Peromyscus beatae)." Advisor: Dr. I.F. Greenbaum.

Professional Experience
Current Position: Associate Professor, Department of Biological Sciences, Tarleton State University. September 2001-present.

Additional Postgraduate Positions:
Assistant Professor, Department of Biological Sciences, Tarleton State University. September 1996-August 2001.
Assistant Professor, Department of Biology, University of South Dakota. August 1993 - June 1996.
Postdoctoral Researcher, Biology Division, Oak Ridge National Laboratory, Oak Ridge, TN. August 1989 - October 1990.

Current Active Research Projects
Genetic analysis of Geomys breviceps.
Effects of wind turbines on Black-capped vireo productivity.

Research Grants (career)
Tarleton State University, Organized Research Grant. Project title: "Genetic analysis of Geomys breviceps." Awarded 1 October 2006. ($12,098)
Tarleton State University, Organized Research Grant. Project title: "Census Methods and Genetics of the Threatened Texas Kangaroo Rat, Dipodomys elator." Awarded 9 September 2005. ($11,073)


Tarleton State University, Organized Research Grant. Project title: "Undergraduate Involvement in Fossil Rim Wildlife Center Research." Awarded November, 1997. ($9,748)


Howard Hughes Medical Institute, Undergraduate Biological Sciences Education Program. Project title: "Research experiences for undergraduates in experimental biology and biometrics." Participant as research mentor and course instructor in 4 yr $1.1 million grant. Awarded March 1995.


University of South Dakota, Faculty Development Grant. Project title: "Training in genetic engineering and recombinant DNA techniques." Awarded February 1994. ($3,270)


Research/Technical Publication Record

Refereed Journal Articles


Other Publications

Published Abstracts:


Papers Presented at Professional Meetings

Graduate Courses Currently Teaching
Evolution

Graduate Students Completed
Chad King: "Resource partitioning between Geomys bursarius and Thomomys talpoides in sympatry." 1996, M.S. in Biology. Currently teaching at the University of Central Missouri.
Completed Ph.D. from Texas Tech University and currently a postdoc at Texas Tech.


**RESEARCH INFRASTRUCTURE**

*Specialized Research Equipment* – Automated DNA analysis system and full DNA research laboratory in the Biology Department.

**GRADUATE ASSISTANTSHIPS/SCHOLARSHIPS AND OTHER GRADUATE SUPPORT AVAILABILITY.**

I currently have a full research assistantship (stipend plus tuition and fees) available for a 2 year study of the effects of wind turbines on Black-capped vireo productivity.
LARRY M. HAUCK, Ph.D., P.E.
Lead Scientist
Texas Institute for Applied Environmental Research
Tarleton State University

Personal
Born October 13, 1949; St. Louis, Missouri

Education
Ph.D., The University of Texas at Arlington (Civil Engineering), 1999.
M.S., The University of Texas at Austin (Environmental Health Engineering), 1974.
B.S. with Highest Honors, The University of Texas at Austin (Civil Engineering), 1973.

Experience
Lead Scientist; Texas Institute for Applied Environmental Research; Tarleton State University; Stephenville, Texas: July 2009 – present.
Deputy Director/Research Professor; Texas Institute for Applied Environmental Research; Tarleton State University; Stephenville, Texas: March 2006 – July 2009.
Assistant Director/Research Professor; Texas Institute for Applied Environmental Research; Tarleton State University; Stephenville, Texas: September 1995 – February 2006.
Research Scientist; Texas Institute for Applied Environmental Research; Tarleton State University; Stephenville, Texas; March 1993 - August 1995.
Research Hydraulic Engineer, United States Army Corps of Engineers Waterways Experiment Station; Vicksburg, Mississippi; June 1988 - September 1991.
Engineer; Texas Water Development Board; Austin, Texas; 1981 - 1985.
Engineer; Private Consulting; Austin, Texas; 1980 - 1982.
Research Associate; Center for Research in Water Resources; The University of Texas; Austin, Texas; 1974 - 1975.
Staff Engineer; Water Resources Engineers, Inc.; Austin, Texas; 1973.

Registration
Licensed Professional Engineer; State of Texas; No. 42457.

Committees
Science Advisory Committee for Study Commission on Water for Environmental Flows, Senate Bill 1639, 78th Legislature; 2004
Science Advisory Committee for Environmental Flows Advisory Committee, Governor’s Executive Order (RP-50); 2006
Larry M. Hauck, P.E.
Page 2


EPA, Region 6, Regional Technical Assistance Group for Nutrient Criteria Development
Scientific Review Panel, LCRA-SAWS Water Project, 2002-Present
TCEQ Nutrient Criteria Development Advisory Workgroup
Technical Advisor, Brazos River Steering Committee for Brazos River Authority, 1994-Present.

Affiliations
North American Lake Management Society
Water Environment Federation
Chi Epsilon

Present Position Description and Research Interests

As the lead scientist for the Texas Institute for Applied Environmental Research (TIAER), Dr. Hauck is the manager of the environmental sciences and economics program. He supervises a staff of over 20 full-time professionals, including chemists, biologists, economists, hydrologists, and soil scientists, and typically 6 or more student workers and graduate assistants. Specific areas of responsibility include the following:

- Administration of the research efforts of the environmental sciences and economics program of TIAER with an operational budget of over $1 million.

- Responsible for overall technical direction of all research efforts at TIAER in the areas of environmental sciences and economics.

- Project manager of a multi-year, multi-million dollar contract with the Texas Commission on Environmental Quality that provides assistance on total maximum daily load policy and development.

- Procurement of extramural funding to continue TIAER research efforts, development of new funding sources, and maintaining of relationships with agencies such as the US Environmental Protection Agency, the Texas Commission on Environmental Quality, and the Texas State Soil & Water Conservation Board.

Dr. Hauck's research interests include loading of nutrients in agricultural watersheds, biological and chemical response of receiving waters to nutrient enrichment, connection of flow and management of agricultural practices to receiving water quality, and application of watershed loading models and hydrologic/water quality models. Recently he has been involved in projects applying bacterial source tracking and the load duration curve method to the TMDL process. He is the project manager for several TMDL projects in Texas that involve nutrients, bacteria, and dissolved oxygen.
Publications and Presentations

Refereed Articles


Conference Presentations and Proceedings


Larry M. Hauck, P.E.
Page 7


Technical Reports


TIAER and others. 2006. Monitoring Report for Bacterial Source Tracking Segments 0806, 0841, and 0805 of the Trinity River Bacteria TMDL. Prepared for the Texas Commission on Environmental Quality, Texas Institute for Applied Environmental Research, Tarleton State University, Stephenville, Texas.


Larry M. Hauck, P.E.  
Page 13


Larry M. Hauck, P.E.
Page 14

Flower, J., J. Williams, and L. Hauck. 1996. NPP integrated modeling system: Calibration of the APEX Model for dairy waste application fields in Eath County, Texas. PR96-07. Texas Institute for Applied Environmental Research, Tarleton State University, Stephenville, Texas.

Gassman, P. and L. Hauck. 1996. The environmental component of the National Pilot Project integrated modeling system,” Livestock Series Report 8, Center for Agricultural and Rural Development, Iowa State University.


Hauck, L., A. Teeter, W. Pankow, and R. Evans. San Francisco Central Bay suspended sediment movement - Report 1: Summer condition data collection program and numerical model verification. Technical Report HL-90-6, U.S. Army Corp of Engineers Waterways Experiment Station, Vicksburg, MS.


Larry M. Hauck, P.E.

Page 15


Hauck, L., G. Fruh, P. Schmidt. 1976. Before and after studies of the effects of a power plant installation and computer simulation of the thermal plume from the Ferguson Power Plant Lake LBJ. The University of Texas at Austin.

Hauck, L. 1975. Field investigation and computer simulation of the thermal plume from the Ferguson Power Plant on Lake Lyndon B. Johnson. M.S. Thesis; The University of Texas at Austin; January 1975


Summary of Publications and Presentations

<table>
<thead>
<tr>
<th>Category</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Refereed Articles</td>
<td>22</td>
</tr>
<tr>
<td>Technical Reports</td>
<td>105</td>
</tr>
<tr>
<td>Conference Proceedings</td>
<td>30</td>
</tr>
<tr>
<td>Presentations (no proceedings)</td>
<td>20</td>
</tr>
</tbody>
</table>
Dr. Barry D. Lambert  
Tarleton State University  
Division: Academic Affairs: College of Agriculture and Human Sciences  
Animal Science  
(254) 968-9217  
Email: BLAMBERT@TARLETON.EDU

Education

Ph D, Kansas State University, 2001.  
Major: Animal Science  
Dissertation Title: Methionine metabolism in growing cattle

MS, Tarleton State University, 1998.  
Major: Biology  
Dissertation Title: The addition of phytase to the diet of Holstein calves: Effects on the utilization of phosphorus from phytate

BS, Tarleton State University, 1996.  
Major: Animal Science

Administrative Assignments

Department Chairperson, Department, June 1, 2008 - Present.  
Responsibilities: Oversee departmental budgets, course schedules, faculty evaluation, program evaluation, curriculum, and program development.

Professional Positions

Academic

Assistant Professor, Tarleton State University. (June 1, 2003 - Present).

Research Scientist, Texas AgriLife Research. (June 1, 2003 - Present).

Professional

Postdoctoral Fellow, Baylor College of Medicine. (August 1, 2001 - May 15, 2003).

Faculty/Staff Rank

Starting Rank: Assistant Professor (June 1, 2003)  
Assistant Professor: June 1, 2003

Licensures and Certifications

Certified Professional Animal Scientist, Federation of Animal Science Societies. (July 1, 2007 - Present).

Professional Memberships

American Society of Animal Sciences.
Development Activities Attended


Conference Attendance, "31st Annual Southern Dairy Conference." (February 2005).


Conference Attendance, "International meeting of the Center for Academic Integrity." (October 2004).


TEACHING

Teaching Experience

Tarleton State University
400, Research and Writing in Animal Science, 1 course.
AGRI 585, Sem: Presentation, 1 course.
ANSC 202, Dairying, 1 course.
ANSC 399, Coop Education, 2 courses.
ANSC 400, Resrch and Writing in Ansc, 2 courses.
ANSC 484, Internship, 6 courses.
ANSC 485, Seminar, 3 courses.
ANSC 486, Animal Science Problems, 1 course.
ANSC 504, Ruminant Nutrition, 1 course.
ANSC 585, 4 courses.
ANSC 590, Special Topics in Ansc, 2 courses.
ANSC 599, Internship, 2 courses.
D S 202, Dairying, 1 course.

Directed Student Learning

Master's Thesis Committee Chair, "Phosphorus Transport by the Dairy Cow Small Intestine," Other (Within Tarleton State University). (September 1, 2007 - Present).
Advised: Andrew Foote

Master's Thesis Committee Chair, "Use of Distillers Grains in Small Ruminant Diets," Other (Within Tarleton State University). (September 1, 2007 - Present).
Advised: Rachel Allphin
Master's Thesis Committee Member, "Effects of Pesticides on Fly Populations on Dairy Farms," Other (Within Tarleton State University). (September 2007 - Present). Advised: Patrick McClellan

Dissertation Committee Member, "Effects of Condensed Tannins on Nutrient Availability in Goats," Other (Outside Tarleton State University). (September 1, 2006 - Present). Advised: Suzika Pagan


Master's Thesis Committee Chair, "Effects of Protein and Carbohydrate Supplementation on Low Quality Forage Digestion in Growing Meat Goats." (September 2006 - December 2008). Advised: Michelle Reinhart


Other, Other (Within Tarleton State University). (August 2008). Advised: Pacer Hughes

Master's Thesis Committee Chair, "Effect of Forage Quality and Stage of Maturity on Total Tract Phosphorus Disappearance Using the Mobile Bag Technique in Cattle." (September 2006 - August 2008). Advised: Adrianna Riojas

Master's Thesis Committee Chair, "In Vitro Disappearance of Several Native South Texas Grasses Using Goat and Steer Rumen Fluid." (September 2006 - August 2008). Advised: Angela Lee

Master's Thesis Committee Member, Other (Within Tarleton State University). (September 2005 - August 2008). Advised: Sarah Christian

Master's Thesis Committee Member, "Effects of Condensed Tannins on Fiber Digestibility," Other (Within Tarleton State University). (August 2007). Advised: Dawn Pawelek

Master's Thesis Committee Member, "Effects of Tasco on Swine Performance," Other (Within Tarleton State University). (August 2007). Advised: Kally Field

Master's Thesis Committee Chair, "Effects of Mineral Supplementation on Reproductive Performance in Lactating Dairy Cows," Other (Within Tarleton State University). (September 1, 2005 - August 30, 2007). Advised: James Crenwelge
Master's Thesis Committee Member, "Effects of Nutrition on Swine Reproduction," Other (Within Tarleton State University). (August 2006).
Advised: Jared Jackson

Other, Other (Within Tarleton State University). (August 2006).
Advised: Brandi Chandler

Advised: Heidi Meyers

Master's Thesis Committee Chair, "Effects of Protein and Carbohydrate Supplementation on Fiber Digestion and Performance of Growing Meat Goats." (September 1, 2004 - August 30, 2006).
Advised: Jodi Patterson

Master's Thesis Committee Chair, "Availability of Phosphorus in Common Dairy Feedstuffs." (September 1, 2004 - August 30, 2006).
Advised: Nichole Cherry

Master's Thesis Committee Chair, "Effects of L-Carnitine on Sheep Undergoing a Sub-Lethal Ammonia Challenge." (June 1, 2003 - August 30, 2004).
Advised: Dillon Walker

RESEARCH

Published Intellectual Contributions

Refereed Journal Articles


**Conference Proceedings**


Journal Articles


Periodicals


Other


**Presentations Given**

Contracts, Grants and Sponsored Research

Grant

Witte, Roger D., Muir, James P (Principal), Lambert, Barry D. (Supporting), Mukhtar, Saqib (Co-Principal), McGahan, Donald G (Supporting), Harris, Bill (Co-Principal), "Developing and Demonstrating Effective Vegetative Filter Strips for Concentrated Feeding Operations in North Central Texas," Sponsored by TSSWCB-EPA 319h State, $400,421.00.


Harp, Randal (Principal), Lambert, Barry D. (Supporting), McGregor, Kyle W (Supporting), "Effects of Ractopamine on Swine Reproductive Performance," Sponsored by TSU, Tarleton State University, $14,000.00. (October 2004 - August 2005).

Sponsored Research


Harp, Randal (Principal), Lambert, Barry D. (Co-Principal), Kattes, David Hugh (Supporting), "Effects of Tasco on horn fly (Haematobia irritans) larval emergence and development in Manure," Sponsored by Acadian Agritech, Tarleton State University, $2,000.00.


Lambert, Barry D. (Principal), "Effects of Dietary Niacin on Feed Intake in Beef Steers," Sponsored by Lonza Inc, Private, $6,000.00. (August 2009).
Lambert, Barry D. (Principal), "Effects of Condensed Tannins on In Vitro Fiber Degradation in Cattle and Goats," Sponsored by Tarleton State University Research Committee, Tarleton State University, $6,500.00. (September 2007 - August 2008).

Lambert, Barry D. (Principal), "Effects of dietary enzymes on phytate phosphorus excretion by lactating Holstein cows," Sponsored by Animal Feed Tech., Private, $9,000.00. (August 2007).

Lambert, Barry D. (Principal), "Performance of growing goat kids fed a complete diet with intake limiter," Sponsored by Land'O Lakes Purina, Private, $7,000.00. (August 2007).

Lambert, Barry D. (Principal), "Effects of L-carnitine on plasma and tissue L-carnitine concentrations in rats," Sponsored by Lonza Inc, Private, $15,000.00. (August 2006).

Harp, Randal (Principal), Mabry, Casey (Supporting), Godfrey, Julie (Supporting), Shelton, Nick (Supporting), Hines, Randy (Supporting), Lambert, Barry D., "A Comparison of Growth, Carcass Characteristics and Cost of Gain Among Hogs Marketed at Heavy and Light Weights," Sponsored by Columbia Packing Company, Private, $1,500.00. (September 2004 - December 2005).


Awards and Honors

Faculty Excellence in Scholarship, Tarleton State University. (May 5, 2007).

Intellectual Contributions in Submission

Refereed Journal Articles


Research in Progress

"Bermudagrass management in the Cross Timbers region of Texas" (On-Going)

"Comparing native and exotic grasses with different nitrogen sources for potential as sustainable forage system" (On-Going)

"Determination of Phosphorus Transporters in the Intestinal Tract of Dairy Cattle" (On-Going)
"Effect of Forage Quality and Stage of Maturity on Total Tract Phosphorus Disappearance Using the Mobile Bag Technique in Cattle" (Writing Results)

"Gut loading calcium in field crickets for a food source for captive frogs" (Writing Results)

"Insecticide Resistance in House Fly, Musca domestica, Populations in Four Dairies in Central Texas, USA" (Writing Results)

"Multi-location Evaluation of Prairie Acacia" (On-Going)

"Nutritive Value of DDG in Small Ruminant Diets" (On-Going)

"Nutritive Value of Native Plant Species" (Writing Results)

SERVICE

Department Service

Committee Member, M.S. Planning Committee. (2005 - Present).

Faculty Advisor, Tarleton State University Block and Bridle Club. (2003 - Present).

Faculty Advisor, Tarleton State University Dairy Club. (2003 - Present).

Committee Chair, Wildlife Management Faculty Member Selection Committee. (2005).

College Service

Committee Member, Tarleton State University Journal of Student Research. (2005 - Present).


Committee Member, M.S. Review Committee. (2005 - 2006).

University Service

Committee Member, Dairy Adviscory Committee. (2003 - Present).

Faculty Mentor, Residential Living and Learning Faculty Partner Program. (September 2008 - December 2008).

Committee Member, Summer School Task Force. (September 2008 - December 2008).
Committee Member, Tarleton State University Academic Space Committee. (2007).
Committee Member, Tarleton State University Graduate Council. (2005 - 2007).
Committee Member, Tarleton State University Research Committee. (2005 - 2007).

Professional Service

Member, Board of Directors, Tri-County Agribusiness Association. (2004 - 2007).

Public Service

Judge, Texas Farm Bureau Young Farmer Rancher Speaking Contest. (2008).
CURRICULUM VITAE
July, 2009

Personal
Bertis Britt Little, M.A., Ph.D.
United States Citizen

Address:  
Associate Vice President of Academic Research and Grants
Tarleton State University
Stephenville, Texas 76402-0010

Phone:  
Office (254) 968-9463  Home (817) 579-8131

Education
B.A.  
Anthropology, Appalachian State University (Boone, North Carolina), 1976. Minors: sociology.

M.A.  
Physical Anthropology (Sub-field: Primatology), Ball State University (Muncie, Indiana), (1979) 1982.

Ph.D.  
Biological Anthropology (Sub-field: Human Genetics), Applied Mathematics. The University of Texas at Austin, 1983. Examination Areas: Human Genetics, Human Physical Growth and Development.

Postdoctoral study  
Mathematics (Probability Theory and Statistics), The University of Texas at Austin. 1984-85.

Academic and Research Appointments (reverse chronological order)
Professor of Computer Science and Mathematics, Tarleton State University, 2000-present.
Special Invited Foreign Professor and Associate Director, Center for Risk Management Research, School of Management, Dalian University of Technology, Dalian, China, 2008—present.
Senior Research Scientist (Pharmacology 2000-present; Medical Services, Divisions of Gastroenterology and Cardiology, 2007-present), Dallas VA Medical Center, 2000—present.
Associate Vice President for Academic Research and Grants, Tarleton State University, 1999-present.
Assistant Vice President for Academic Research and Grants, Tarleton State University, 1998-1999.
Director, Texas Engineering Experiment Station, Texas A&M University System, 2000—present.

Associate Professor, Division of P renatal Diagnosis, Department of Obstetrics and Gynecology, Southwestern Medical School, The University of Texas Southwestern Medical Center at Dallas, 1992 to 1999.

Assistant Professor, Division of Clinical Genetics, Department of Obstetrics and Gynecology, Southwestern Medical School, The University of Texas Southwestern Medical Center at Dallas, 1985 to 1992.

Adjunct Professor, Human Development and Early Childhood Disorders, Graduate School of Human Development, The University of Texas at Dallas, 1999 to 2000.

Adjunct Assistant/Associate Professor, Human Development and Early Childhood Disorders, Graduate School of Human Development, The University of Texas at Dallas, 1992 to 1999.

Lecturer, The University of Texas at Austin, Department of Anthropology, 1983 to 1985.
Continuing Education
4. Short Course: Medical and Experimental Mammalian Genetics, Johns Hopkins University and Jackson Laboratory, 28th Annual Course. Bar Harbor, Maine, July 18 to August 1, 1987.

Honors, Scholarships, and Awards
1. Accelerated Degree Program, Carnegie Corporation, Appalachian State University, 1974-1976.
2. Academic Scholarship, Appalachian State University, 1974-1975.
4. Travel Scholarship, Graduate School, The University of Texas at Austin, 1981.
5. University Research Institute, Grant (Malina R.M. (PI) and B.B. Little (doctoral fellow)) Data management and security system, The University of Texas at Austin, 1981.
6. Professional Development Award, Graduate School, University of Texas at Austin, 1982-3.
7. Junior Investigator Award (NIH Sponsored), to participate in 14e Congrés international d’auxologie, Université de Montreal, 1985.

Grants for Research
1. Malina, R.M. (PI) and B.B. Little (Postdoctoral Fellow): Genetic and Environmental Influences on Anthropometric Asymmetry in Undernourished Children, Biological Humanics Foundation (Eugene McDermott), 1984-1985, $18,000.
Grants for Research


Languages
German - reading and writing; French – reading; Spanish – reading; Portuguese – reading; Italian – reading.

Memberships
1. American Association of Physical Anthropologists
2. American Association for the Advancement of Science
3. Elected Fellow, Human Biology Council
4. Phi Kappa Phi
7. Society for the Epidemiological Research
8. Sigma Xi - The Research Honor Society
9. Elected Fellow, Royal Anthropological Institute (London, UK)
10. Association of Certified Fraud Examiners (ACFE)
11. Association for Computing Machinery (ACM)
12. Society for Industrial and Applied Mathematics (SIAM)
13. IEEE

**Committees, Expert Reviewer and Other Service**

2. Dept. of Anthropology, University of Texas at Austin, Graduate Admissions Committee, 1980-1983.
22. Ethics in Research Officer, Texas A&M University System, 1998-present.
23. Provost's Council and University Planning Council, Tarleton State University, 1998-present.
31. Member, Strategic Planning Committee, Sigma Xi National Headquarters, 2004-2008.
33. International Advisory Board, Data Mining and Information Engineering Programs, Wessex Institute
34. Member, Nominations Committee, Sigma Xi National Headquarters, 2006-2010; Chairman, 2007.
35. Texas Ag Forum, Steering Committee Member (top 20 Agriculture leaders in Texas), 2004- present.

Other Employment Experience
1. Instructor, Cape Fear Technical Institute, (now Cape Fear Community College), Wilmington, N.C., 1976/7-1978.
2. Teaching Graduate Assistant, Ball State University, 1978 - 1979.
4. Field Researcher, Department of Sociology, University of Virginia, Middletown III Project, 1979.
6. Research Associate II, University of Texas at Austin, Department of Anthropology, 1980.
8. Statistical Research Consultant, St. Edward's University (Austin), GED-CETA, Manpower Impact Assessment Project, 1980 (June to December).
9. Research Associate III, The University of Texas at Austin, Department of Anthropology, Data Base Management and Security Project, 1981 (May to December).
12. Lecturer, The University of Texas at Austin, Department of Anthropology, 1983-1985.
15. 3-D Medical Imaging Specialist, Austin Medical Applications, 1984-1985.

Selected Papers Delivered
5. Village and household ecology effects on child growth in a rural agrarian community in southern

Selected Papers Delivered

13. Prevalence of HIV among pregnant women and newborns in Dallas County, Texas. Infectious Disease Society for Obstetrics and Gynecology, 18th Annual Meeting, Québec City, Canada, 1989.
14. HIV prevalence in pregnant intravenous drug abusers in Dallas, Texas. Infectious Disease Society for Obstetrics and Gynecology, 18th Annual Meeting, Quebec City, Canada, 1989.
15. First trimester exposure to acyclovir. Infectious Disease Society for Obstetrics and Gynecology, 18th Annual Meeting, Quebec City, Canada, 1989.
19. Is cocaine really a teratogen, or just keeping bad company? Society for Gynecologic Investigation, 1996.

Publications
Computerized Knowledge Base:

Theses:
1. **Little, Bertis Britt**: A numerical taxonomy of the Primates. Ball State University, Muncie, Indiana (M.A. Thesis), 1979 (1982).

2. **Little, Bertis Britt**: Sibling similarity in growth status and rate among school children in a rural Zapotec community in the Valley of Oaxaca, Mexico. The University of Texas at Austin, Austin, Texas (Doctoral Dissertation), Copyright 1983, University Microfilms, Ann Arbor.

Publications
Peer Reviewed Articles: (*designates articles with medical or graduate students or post-doctoral fellows)


**Publications** (continued)

Peer Reviewed Articles:


**Publications (continued)**

Peer Reviewed Articles:


Publications (continued)
Peer Reviewed Articles:


Publications (continued)
Peer Reviewed Articles:


**Publications** (continued)

Peer Reviewed Articles:


**Publications** (continued)

**Peer Reviewed Articles:**


**Publications (continued)**

**Peer Reviewed Articles:**


Publications (continued)

Peer Reviewed Articles:


Publications (continued)

Peer Reviewed Articles:


Publications (continued)

Peer Reviewed Articles:


**Publications**

Book Chapters:


**Publications** (continued)

Book Chapters:


Publications (continued)

Book Chapters:


Publications (continued)
Books Written:


In Preparation for 2009 Publication.


ANNE MARIE SPANGLER McFARLAND, Ph.D.
Research Scientist
Texas Institute for Applied Environmental Research (TIAER)
Tarleton State University

Present Position Description and Research Interests
As a research scientist for the Texas Institute for Applied Environmental Research (TIAER), Dr. McFarland is responsible for developing TIAER's water quality analysis program and managing the extensive databases associated with TIAER's water quality monitoring network including field, chemical, and biological data. Dr. McFarland also has project management responsibility for several of TIAER's research projects and supervises a technical staff of three to six individuals. Dr. McFarland's expertise is in the area of systems analysis and statistical evaluation of environmental interactions with emphasis on relationships of surface water quality with agricultural activities and contaminant transport processes. Current research involves evaluation of nutrient concentrations and trends in the Bosque River watershed with emphasis on relationships of land use to in-stream water quality; assessment of phosphorus control practices for dairy waste application; and evaluation of sampling methods for watershed monitoring.

Area of Expertise/Interest:
Surface water quality, relationships of land use to instream water quality with particular focus on nutrient enrichment associated with agricultural operations

Education:
Ph.D., Texas A&M University, Rangeland Ecology and Management, 1990
M.S., Washington State University, Range Management, 1986
B.S., Washington State University, Forestry and Range Management, 1984

Recent Experience:
Research Scientist, Texas Institute for Applied Environmental Research, Tarleton State University, Stephenville, Texas: February 2000 to present.
Senior Research Associate, Texas Institute for Applied Environmental Research, Tarleton State University, Stephenville, Texas: September 1993 - September 1996.
Adjunct Faculty, Environmental Sciences Masters Program, Tarleton State University, Stephenville, Texas: January 1995 to 2004.

Current Active Research Projects

North Bosque River Watershed Water Quality Assessment CWA Section 319(h)
Total Budget: $983,000
Timeframe: November 1, 2005 through August 31, 2010 (contract extended)
Contact: Allison Woodall, Texas Commission on Environmental Quality (TCEQ), (512) 239-4628.
TIAER is providing assessment activities at eight stream sites and one Public Law 566 reservoir within the North Bosque River watershed for the Texas Commission on Environmental Quality. Collection and analysis of
streamflow and water quality data will be used to determine the large-scale effectiveness of best management practices (BMPs) to reduce nonpoint source derived phosphorus. A secondary benefit of the assessment will be the evaluation of any changes in nitrogen, suspended solids, and bacteria (E. coli) concentrations that occur as a result of BMP implementation. The monitoring activities focus on existing stations at which temporally intensive data collection has occurred for approximately 10 years by TIAER. Trend analysis will be used to assess changes in water quality.

Microwatershed-Based Approach to Monitoring and Assessing Water Quality in the North Bosque River Watershed
Total Budget: $208,000
Timeframe: September 1, 2008 through February 28, 2010
Contact: T.J. Helton, Texas State Soil and Water Conservation Board (TSSWCB), (254) 773-2250 ext 234 or (800) 792-3485 ext 234.
TIAER is providing water quality assessment activities at 18 microwatershed sites within the North Bosque River watershed. This monitoring effort makes use of numerous automated sampling systems in TIAER’s possession to evaluate water quality samples collected from both storm runoff and routine monitoring. All samples are analyzed in TIAER’s laboratory for several nitrogen and phosphorus constituents and total suspended solids. In addition, TIAER analyzes routine grab samples for E. coli and. Historical or nondirect data obtained from other projects with approved by EPA or the State of Texas QAPs are being used to supplement this project. Data collected for this project will be used to determine the reduction of nonpoint source pollution associated post-TMDL implementation efforts, such as the manure composting program, and provide data to inform TSSWCB of areas where focused reduction efforts are most needed.

Assessing Water Quality Management Plan Implementation in the Middle and South Bosque River and Hog Creek Watersheds
Total Budget: $514,000
Timeframe: November 1, 2007 through August 31, 2010
Contact: Loren Henley, Texas State Soil and Water Conservation Board (TSSWCB), (254) 773-2250 ext 234 or (800) 792-3485 ext 234.
TIAER is providing storm and routine monitoring of the Middle and South Bosque River and Hog Creek watersheds in order to assess agricultural nonpoint source reductions associated with implementation of water quality management plans (WQMPs) within waterbodies of concern for nitrite-nitrate nitrogen. A secondary objective is to monitor reductions in bacteria concentrations through routine grab sampling. A final report will be developed using historical data collected by TIAER (1995 – 2003) and post implementation data collected under this work plan to assess preexisting and post-WQMP implementation effects.

Research Grants

Publications Record (last 10 yrs)

Refereed Articles:


C:\Documents and Settings\Administrator\My Documents\COAHR-Admin\Programs\PhD\Resume update, Sept 09\McFarland.doc from November 2007.


Book Chapters:

Other Publications:

TIAER Reports:


Millican, Jimmy, Anne McFarland, and Bill Bethel. 2008. Review of Water Quality and Watershed Characteristics for Segment 1240 (White River Lake), Segment 1425 (O.C. Fisher Lake), and Segment 2307 (Rio Grande below Riverside Diversion Dam). Texas Institute for Applied Environmental Research, Tarleton State University, Stephenville, Texas (PR0805).


**Papers Presented at Professional Meetings (last 10 yrs)**


**Posters at Professional Meetings (last 10 yrs)**


**Graduate Courses Currently Teaching**

None

**Graduate Students Completed**

Served as a committee member for the following students at Tarleton State University


- William Dwayne Crump, MS in Environmental Science, Comparison of stormwater from two, first order, ephemeral streams in Stephenville, Texas/2000. Last known position with the Fort Worth District Permits, Environmental and Regulatory Division, United States Army Corp of Engineers in 2005.

- Amy Lynn Truman, MS in Environmental Science, Relationship of fecal coliform bacteria with water quality parameters and land uses in the upper north Bosque River watershed/1997. Currently Senior Environmental Scientist with Carter-Burgess in Fort Worth, Texas.

**Involvement in Collaborative Projects as Member of Research Team**

**Project Leader:**

Extending TMDL Efforts in the North Bosque River Watershed, Texas State Soil and Water Conservation Board supporting agency, April 1, 2006 through March 31, 2008 ($736,000).

Storm Water Best Management Practices (BMPs) Field Trials of Erosion Control Compost in Reclamation of Rock Quarry Operations, subcontract with Center for Research in Water Resources (CRWR) through the Texas Commission on Environmental Quality, September 1, 2005 through August 31, 2008 ($145,000).


**In Charge of Major Project Components:**


Professional Affiliations

Soil Science Society of America - Associate Editor for the Journal of Environmental Quality (2001-2004)
SERA - IEG 17 (Southern Regional Extension and Research Activity Information Exchange Group dealing with advances in soil phosphorus management)
Sigma Xi, The Scientific Research Society – President Tarleton State University Chapter (2006-2007)
American Association for the Advancement of Science
North American Lake Management Society (NALMS)
American Water Resources Association
Soil & Water Conservation Society
Society of Range Management
Dr. James M. Mueller  
Tarleton State University  
Animal Science  
(254) 968-9216  
Email: mueller@tarleton.edu

Education

Ph D, Texas Tech University, 1999.  
Major: Wildlife Science  
Dissertation Title: Effect of red imported fire ants on reproduction, health, and survival of northern bobwhites

MS, Texas A&M University, 1990.  
Major: Wildlife & Fisheries Sciences  
Dissertation Title: Population dynamics of the Concho water snake

BS, Texas A&M University, 1987.  
Major: Wildlife & Fisheries Sciences

Administrative Assignments

Assistant Department Chairperson, Department, June 2008 - Present.  
Responsibilities: Assist with management of Department of Animal Sciences with 12 faculty and 650 undergraduates.

Assistant Department Chairperson, Department, August 2007 - May 2008.  
Responsibilities: Interim Assistant Department Head

Professional Positions

Academic

Assistant Professor, Tarleton State University. (August 2005 - Present).

Assistant Professor, Sul Ross State University. (August 1999 - August 2005).

Graduate Research Assistant, Texas Tech University. (October 1995 - August 1999).


Professional


Faculty/Staff Rank

Starting Rank: Assistant Professor (September 1, 2005)  
Assistant Professor: September 1, 2005
Licensures and Certifications


Professional Memberships

American Society of Mammalogists.

Society for the Study of Amphibians and Reptiles.

Southwestern Association of Naturalists.

The Wildlife Society.

Development Activities Attended


TEACHING

Teaching Experience

Tarleton State University

AGRI 590, Special Topics, 1 course.
ANSC 201, Avian Science, 3 courses.
ANSC 486, PROB - WILDLIFE CONSERVATION, 1 course.
ANSC 586, Prob-Assist Teaching, 3 courses.
ANSC 588, Thesis, 3 courses.
ANSC 590, Tpcs: Ecological Appl., 2 courses.
ANSC 599, Internship, 1 course.
RNRM 221, Wildlife Conservation & Mgmt, 4 courses.
WLDM 201, Avian Science, 3 courses.
WLDM 221, Wililfe Conservation and Mgmt, 4 courses.
WLDM 311, Wildlife Diseases, 2 courses.
WLDM 375, Conservation Natural Resources, 4 courses.
WLDM 399, Cooperative Education, 8 courses.
WLDM 401, Population Dynamics, 1 course.
WLDM 484, Internship, 5 courses.
WLDM 485, Sem:Wildlife Management Senior, 2 courses.
WLDM 490, Special Topics, 1 course.
WLDM 590, Tpcs: Ecological Appl., 3 courses.

Directed Student Learning

Master's Thesis Committee Member, Biological Sciences. (January 2009 - Present).
Advised: David Davis

Master's Thesis Committee Chair, "Evaluation of the Texas Chapter of The Wildlife Society
Advised: Amy Potts

Master's Thesis Committee Member, "Teaching and Learning Style of Texas AgriLife Extension
Service Agents," Agri Services and Development. (September 2007 - Present).
Advised: Roger Trotter

Master's Thesis Committee Chair, "Status and Habitat Modeling of the Brazos Water Snake
(Nerodia harteri harteri)," Animal Science. (September 2006 - Present).
Advised: Dustin McBride

Advised: James Arno, Tara Bayliss, Kristan Jenschke, Jeremiah Jones

Master's Thesis Committee Member, Biological Sciences. (January 2008 - December 2008).
Advised: Sara Harsley

Advised: Whitney Baker, Nathan Grigsby, Daniel Price, Travis Sagebiel

RESEARCH

Published Intellectual Contributions

Book Chapters

and S. P. Bush (Ed.), *Observations on the thermal ecology of montane rattlesnakes* (pp. 287-
290). Loma Linda, California: Loma Linda University Press.

(2007). In L. Brennan (Ed.), *Montezuma quail* (pp. 23-39). College Station, TX: Texas A&M
University Press.

Refereed Journal Articles

Whiting, M. J., Dixon, J. R., Greene, B. D., Mueller, J., Thornton, Jr, O. W., Hatfield, J. S.,


**Other**


**Presentations Given**


**Contracts, Grants and Sponsored Research**

**Contract**

Mueller, James (Principal), Miller, Mike (Co-Principal), "Status Survey of the Brazos Water Snake," Sponsored by Texas Parks and Wildlife Department, State, $45,984.00. (September 1, 2006 - August 31, 2008).
Grant

Mueller, James (Principal), "Hair Snag Survey of River Otters (Lontra canadensis) to Determine Distribution and Relative Abundance in Eastern Texas," Sponsored by Tarleton State University, Tarleton State University, $4,986.00. (September 1, 2008 - August 31, 2009).

Mueller, James (Principal), "Status Survey and Habitat Modeling of the Brazos Water Snake," Sponsored by Tarleton State University, Tarleton State University, $6,126.00. (September 1, 2006 - August 31, 2007).

Research in Progress

"Evaluation of the Texas Chapter of The Wildlife Society Wildlife Conservation Camp" (On-Going)

"Hair Snag Survey of River Otters (Lontra canadensis) to Determine Distribution and Relative Abundance in Eastern Texas" (On-Going)

"Mammal Inventory of the Rio Grande Wild and Scenic River" (Writing Results)

"Status and Habitat Modeling of the Brazos Water Snake (Nerodia harteri harteri)" (Writing Results)

SERVICE

College Service

Committee Member, Faculty Expectations Committee. (September 23, 2008 - Present).

University Service

Committee Member, Institutional Review Board, Subcommittee for Lab Animal Use. (September 1, 2008 - Present).

Committee Member, Graduate Council. (September 1, 2007 - Present).

Faculty Advisor, Student Wildlife Society. (September 1, 2005 - Present).

Faculty Advisor, Tarleton Ducks Unlimited. (September 1, 2007 - September 30, 2008).

Professional Service

Board of Scientists, Chihuahuan Desert Research Institute, Fort Davis, TX. (1999 - Present).

Committee Member, Cottam Award Committee, Texas Chapter of the Wildlife Society. (March 1, 2007 - February 28, 2008).

Committee Member, Publications Award Committee, Texas Chapter of The Wildlife Society. (March 1, 2007 - February 28, 2008).
Committee Chair, Scholarship Committee, Texas Chapter of The Wildlife Society. (March 1, 2006 - February 28, 2007).


Board of Directors, Chihuahuan Desert Research Institute, Fort Davis, TX. (2001 - 2006).

Public Service


Assistant Coach, Stephenville Soccer Association. (September 1, 2006 - August 31, 2007).
CUMULATIVE FACULTY ACHIEVEMENT REPORT
2009
COLLEGE OF AGRICULTURE AND LIFE SCIENCES
TEXAS AGRILIFE RESEARCH, STEPHENVILLE

I. Name: JAMES P. MUIR

Rank: Professor

Unit: Texas A&M University Research & Extension Center, Stephenville

Date of appointment: 1997

Promoted to Associate Professor: 2002

Promoted to Professor: 2007

II. EDUCATION & PROFESSIONAL EXPERIENCE

PhD University of Florida, 1989. Agronomy

MSc University of Florida, 1985. Agronomy

BSc Wheaton College, 1981. Biology

Employment history:

2007-present. Professor, Texas Agricultural Experiment Station, Texas A&M University. Forage agronomist at the Stephenville Research Center.

2002-2007. Associate Professor, TAES, Texas A&M University.


**Awards & Recognition:**

- **Merit Award**, American Forage & Grassland Council, 2008.
- **Special Achievement Award for Research**, Soil & Crop Science Department, Texas A&M University, 2004.
- **Agronomy Journal** Editors’ Citation for Excellence in Manuscript Review, 2002.

**III. CURRENT POSITION DESCRIPTION**

The principal goal of the Stephenville Forage Project is to respond to forage research, education and outreach needs in the Cross Timbers. Farms in north-central Texas are generally small, multi-faceted and, increasingly, focused on aesthetic or recreational value to part-time residents. Research emphases include:

- alternative legume forages and manure P management for the dairy industry
- native herbaceous legumes for restoration and wildlife in Texas
- forage, supplement, parasite mitigation and brush control systems for goats
- the role of plant condensed tannins in the ruminant environment

**IV. REPORT OF ASSIGNED ACTIVITIES**

**A. Teaching**

Percentage budgeted time: 0%


2. Agronomy 612: Forage Crops Management. Team teaching an on-line module (WORD and POWERPOINT) on warm-season legumes
3. Team teaching Tarleton State University AGRI 580, Scientific Writing 2006-2009

4. Team teaching Tarleton State University AGRI 590, CAFO Management

5. Direction of graduate students
   
a. Presently on committee, MSc:

   Marissa Condren, Tarleton State University, 2007-2009

b. Presently co-chair, MSc:

   Rachel Alphin, Tarleton State University, 2008-2010
   Digestibility of spent brewers’ grains

   Ray Noah, Tarleton State University, 2008-2010
   Forage and seed yields of three Texas perennial legumes.

c. Presently co-chair, PhD:

   Suzika Pagan, PhD Texas A&M University, 2006-2009
   Interaction of phosphorus and condensed tannins in bovines and caprines.

d. Graduate students that have received degrees (* denotes co-chair):

   Andrew Foote, Tarleton State University, 2009.
   “Characterization of NaPi-IIb Phosphate Transporter in the Small Intestine of Dairy Cattle Small Intestine and Correlation to Fecal Phosphorus.” Committee

   *Adrianna Riojas, Tarleton State University, 2008
   “Effects of forage species and maturity on phosphorus availability using the mobile bag technique.”
   Co-chair.

   *Michelle Reinhard, MSc Tarleton State University, 2008
   “Disappearance of low-quality Coastal bermudagrass in goats as affected by energy and protein supplement.”
   Co-chair.

   *Angela Lee, MSc Tarleton State University, 2008
“Forage quality of seven south Texas native grasses under two
fertility regimens.”
Co-chair.

Nichole Cherry, MSc Tarleton State University, 2006
“Phosphorus digestibility in both the rumen and intestinal tract of
bovines.”
Committee member.

Landon Darilek, MSc Tarleton State University, 2006
“Potential for phosphorus sequestration in soils of Erath County.”
Committee member.

*Dawn Pawelek, MSc Tarleton State University, 2006
“Ruminal fiber and condensed tannin degradation of native
perennial Texas in goats.”
Co-chair

*Jodi Paterson, MSc Tarleton State University, 2006
“Protein and/or energy supplementation changes forage digestion
in growing meat goat kids.”
Co-chair.

Anilkumar Samonahally, MSc Tarleton State University, 2006
“Soil phosphorus mapping on three dairies in central Texas.”
Committee member.

“Effects of composted dairy manure on soil chemical properties and
forage yield and nutritive value of coastal bermudagrass [Cynodon
dactylon (L.) Pers.]” Committee member.

*Catherine Packard, MSc Tarleton State University, 2004
“Peanut stover and coastal hay for goats during the summer
slump.” Co-chair.

*Jamie Foster, MSc Texas A&M, 2004.
“Digestibility of two native Texas wild beans for goats.” Co-chair.

*John Randal Bow, MSc Tarleton State University, 2003.
“Competition of switchgrass and annual cool season legumes.” Co-
chair.
*Sindy Interrante, MSc Tarleton State University, 2002
  “Adaptation of Strophostyles leiosperma and S. helvula to shade.” Co-chair.

*Damiao Nguluve, MSc Tarleton State University, 2001
  “Herbaceous legumes intercropped with crabgrass and fertilized with dairy compost.” Co-chair.

*Stuart Weiss, MSc Tarleton State University, 2001
  “Energy supplements for finishing goats on native savannah or cultivated warm-season pasture.” Co-chair.

Jason Ott, MSc Tarleton State University, 2001
  “Peanut meal for supplementing growing goats on woodland pasture.” Co-chair.

Ezedeen Hamid Osman, MSc Wageningen University, 1999
  “Effect of Rhizobium inoculation and phosphorus application in native legumes grown in local soils.” Research supervisor.

*Douglas Jeffrey Goodwin, MSc Tarleton State University, 1999
  “Interaction of goats and crabgrass/forb pastures in full sunlight and shade.” Co-chair.

Jason Stroup, MSc Tarleton State University, 1999
  “Growth and photosynthesis of upland and lowland ecotypes of Panicum virgatum L.” Thesis supervisor.

e. Graduate thesis/dissertation Evaluation commission

Naligia Gomes de Miranda Silva, 2009, Universidade Federal Rural de Pernambuco
  “Avaliação de características morfológicas e comparação de métodos de estimativas de índice de area de cladódio na palma forrageira”

3. Other activities:


b. Tarleton State University student workers supervised: 30

c. Tarleton State University paid undergraduate interns:
Corrie Thompson, Tarleton 2008
James Holsey, Tarleton 2007
Amanda DeLeon, Tarleton 2007
Jamie Foster, Tarleton, 2001
Sharra Weiss, Tarleton 2000
Julie Booker, Tarleton 1999

d. Field visits/labs
- Abilene Christian University, Stats, 2002
- Lipan 8th Grade Science, 2002
- Food for the Hungry interns, 2008, 2009

e. Student lectures
- Angelo State forage graduate forage class, 2006
- TSU pre-vet club, 2002
- TSU agronomy club, 2000 & 2002
- Abilene stats class, 2001

f. Team-taught classes
- On-line A&M graduate forages class, 2004
- Tarleton CAFO class, 2005

g. Graduate interns

Amanda Acero, University of Puerto Rico 2007-2008
Wandaliz, University of Puerto Rico 2007
Qiaolin Liu, MSc Huazhong University, China, 2007
Franco Rivera, MSc University Puerto Rico, 2006
Suzika Pagan, MSc University Puerto Rico, 2005
E.H. Osman, MSc Wageningen University, Netherlands 1999

g. World Hunger Relief International, NGO Waco

SARE trial: winter forages as green manure, 2007, 2008

h. Invited seminars

- Universidade Federal Rural de Pernambuco, Brazil, 2009. “O papel dos taninos condensados no ecosistema do ruminante.”
- Instituto Nacional de Pecuaria, Portugal, 2008. “O papel dos taninos
condensados no ecosistema do ruminante."


**B. Research**

1. **Percentage budgeted time:** 100%

2. **Plant releases**

   * 'Latitude 34' perennial peanut (*Arachis glabrata*), 2009
     Muir et al. (in progress)

   * 'Rio Rojo' trailing wild-bean (*Strophostyles leiosperma*), 2009
     Muir et al. (in progress)

   * 'Plains' prairie acacia germplasm (*Acacia angustissima*), 2008
     NRCS et al.

   * 'Rio Verde' lablab (*Lablab purpureus*), 2008
     Smith et al.

   * 'Devine' little burr medic (*Medicago minima*), 2007
     Ocumpaugh et al.

   * 'Beewild' rayado bundleflower (*Desmanthus bicornutus*), 2004
     Ocumpaugh et al. (four lines)

   * 'Armadiilo' burr medic (*Medicago polymorpha*), 2003
     Ocumpaugh et al.

3. **Current research projects:**

   Individual experiments within the research project address the objectives in Hatch Project TEX08811 entitled: Forage ecology and management for renewable resources and environmental quality (Author: J. P. Muir; expiration date 2005). Individual experiments are listed below under the relevant hatch objectives.
The following research support personnel are assigned to all experiments. Although these support personnel are assigned to this project, they are shared with AgriLife Extension, Tarleton, and AgriLife Research personnel and support their projects as well.

Nichole Cherry (50%), research assistant in charge of laboratory analyses.

John Randall Bow, research associate in charge of field operations.

NOTE: Individual field and greenhouse experiments may appear more than once under different hatch objectives, depending on applicability of results. Those mentioned a second time are marked “*”. Experiments mentioned are on-going and any research that has been terminated and/or published is deleted from the list.

1. Identify ecological adaptations and develop management guidelines for native, naturalized and introduced leguminous forages.

Experiments under this objective seek to identify and develop forages for native and introduced browsers. Producers, especially small landowners from urban centers, express an interest in returning bermudagrass pastures or peanut fields to native, multi-species prairie and need to know what forbs to plant for wildlife. In addition, the growing number of small and medium-size goat producers in the area are interested in knowing what browse species to cultivate.

- Wildlife feed and habitat related experiments:
  1. Competition between established switchgrass swards interseeded with annual winter legumes with and without dairy compost. (Bow, Muir, Rhykerd, Butler, and Rossiere, 2000-2007.) Graduate student, TSU. Manuscript in revision.
  2. Forage and seed production of *Neptunia pubescens*, *Desmanthus leptolobus*, *Galactia volubilis* and *Desmodium procumbens* under harvest pressure. (Bow & Muir, 2002-2007). Data analysis and manuscript compilation.
  8. Multi-location (Stephenville, Vernon, Beeville and Ardmore) forage yield, nutritive value and seed production of *Desmodium paniculatum* and *Acacia angustissima* var.
hirta under defoliation. (Muir, Butler, Malinowski, Ocumpaugh, 2005-2007). Data analysis and manuscript compilation.


2. Identify physiological limitations and develop management guidelines for switchgrass use in forage/bio-energy systems.

The general goal is to develop management guidelines for switchgrass use in forage/bioenergy systems. Until 2001, the Department of Energy provided funding to evaluate the productivity of switchgrass as a bioenergy source. Much of this work now focuses on publishing data from trials that have been completed.

- Intercropping legumes with switchgrass
  1. Competition between established switchgrass swards interseeded with annual winter legumes with and without dairy compost. (Bow, Muir, Weindorf and Rossiere, 2000-2007). Graduate student, TSU. Manuscript in revision.*

3. Develop forage and soil management systems that provide feed for the dairy, beef, wildlife and goat industries as well as contribute to environmentally sustainable use of dairy waste.

A wide array of grasses, legumes and their mixtures are being evaluated. The main objective is to develop sustainable, environmentally sound forage systems for the region. Included are reliable estimates of nutrient uptake, accumulation in the soil profile and movement in surface and ground water in forage/bioenergy systems using land application of dairy wastes. The effect of perennial forages on the accumulation of soil organic C is another aspect. These are environmental issues as much as plant nutrition experiments. Nitrogen and phosphorus from high rates of dairy manure and compost application are very beneficial to forage production but can have potential negative effects on surface water, an increasingly important source of drinking water for growing urban centers.

- P accumulation in the soil and uptake by forages is an on-going effort to improve manure-P use efficiency in the Bosque River Drainage:

  1. Competition between established switchgrass swards interseeded with annual winter legumes. (Bow, Muir, Weindorf, and Rossiere, 2000-2007). Graduate student, TSU. Manuscript in revision.*
5. Phosphorus uptake of annual forages over-seeded onto coastal and Tifton-85 and subsequent impact on early summer development of the bermudagrass (Muir & Bow, 2004-2007) Field research.

- Evaluation of forages with potential for animal production in the region include:


- Identify and test finishing-systems for meat goats based on cultivated pastures and agro-industrial by-product supplements.

8. Response of in vitro disappearance of low-quality Coastal Bermudagrass to protein and energy supplement in goats. Graduate student, Tarleton. (Reinheirt, Lambert, Foote, &

1. Acquisition of research funds

a. External funding acquired

1. Contracts and grants from external sources (since 1998, TAES/AgriLife)

   Total awarded: $119,044
   Total responsible: $119,044

   Total awarded: $80,956
   Total responsible: $80,956

36. USDA CREES CEAP. 2009. (co-PI) Effects of conservation practices on
   watershed health: comprehensive evaluation for three grazing watersheds
   in Texas.
   Total awarded: $400,000
   Total responsible: $88,450

35. Biofuel Initiative, Texas AgriLife Research. 2009. (PI) Legumes for cellulosic
   biofuels.
   Total awarded: $300,000
   Total responsible: $58,312

34. TCEQ, East Texas RUAA. 2009. (PI) Work order # 3.
   Total awarded: $200,000
   Total responsible: $200,000

   Total awarded: $18,000
   Total responsible: $8,000

   Total awarded: $88,312
   Total responsible: $88,312

   Total awarded: $15,000
   Total responsible: $15,000

30. NRCS-CESU. 2008. (PI) Nutritive value of perennial grasses
Total awarded: $10,080
Total responsible: $10,080

Total awarded: $25,000
Total responsible: $25,000

Total awarded: $21,000
Portion responsible: $0

27. Southern S ARE. 2008 -2011. (co-PI) Sustainable control of gastrointestinal nematodes in or ganic a nd grass-fed s mall ruminant pr oduction systems.
Total awarded: $290,000
Portion responsible: $15,400

Total awarded: $30,000
Portion responsible: $30,000

25. SUN Grant Biofuel Initiative. 2008 -2010. (co-PI) Breeding and testing of new switchgrass cultivars for increased biomass pr oduction i n Oklahoma, Arkansas, Texas and Kansas.
Total awarded: $200,000
Portion responsible: $10,000

Total awarded: $116,103
Portion responsible: $7,688

23. USDA-CREES-Fort Valley State University teaching and research capacity building. 2007-2010. (co-PI) Developing and field testing of natural systems for controlling gastrointestinal nematodes in sheep and goats in the southern USA.
Total awarded: $460,000
Portion responsible: $43,000

22. Borlaug LEAP Fellowship Program. 2007-2008. (PI) for Caroline Wambui,
Kenya. Assessing the impact of protein supplementation and anthelmentic potential of selected browse in Kenya.
Total awarded: $20,000
Portion responsible: $20,000

Total awarded: $21,166
Portion responsible: $21,166

Total awarded: $26,075
Total responsible: $26,075

Total awarded: $301,201
Portion responsible: $50,560

Sustainable and profitable control of invasive species by browsing goats.
Total awarded: $178,000
Portion responsible: $96,000

Improving seed quality and production of native species for rangeland restoration.
Total awarded: $141,468
Portion responsible: $41,200

The north Texas ecotype project.
Total awarded (through Tarleton State): $71,196
Portion responsible: $71,196

Sustainable control of gastrointestinal nematodes in small ruminants using forages containing condensed tannins.
Total awarded: $15,500
Portion responsible: $0

Vegetative strategies for soil phosphorus reduction and subsequent reduced phosphorus runoff from land receiving dairy manure on the north Bosque River.
Total awarded: $238,885
Portion responsible: $160,000 (estimate)

Strategies for soil phosphorus reduction and subsequent reduced phosphorus runoff from land receiving dairy manure on the north Bosque and Leon Rivers.
Total granted: $580,000
Portion responsible: $333,000 (estimate)

Supplementary grant for high school teacher internship. 9 weeks.
Total granted: $8,100
Portion responsible: $8,100

11. SARE Planning Grant. 2003. PI.
Efficacy of using goats for biological control of invasive species.
Total granted: $14,100
Portion responsible: $14,100

Marketing Composted Manure to Public Entities.
Total granted: $824,240
Portion responsible: $148,000

Sustainable cultivated pasture systems for Texas meat goats.
Total granted: $119,100
Portion responsible: $66,617

Supplementary grant for high school teacher internship. 9 weeks.
Total granted: $8,100
Portion responsible: $8,100

Accurate fertilizer-P rates for ryegrass cultivated for different soil-P extractants.
Total granted: $7,000.
Portion responsible: $0

   Supplementary grant for high school teacher internship. 9 weeks.
   Total granted: $8,100
   Portion responsible: $8,100

Hatch Project TEX08811. 2000-2005. PI.
   Forage ecology and management for renewable resources and environmental quality. Expiration date 2005.

   Supplementary grant for high school teacher internship. 9 weeks.
   Total granted: $8,100
   Portion responsible: $8,100

   Native and naturalized legume pasture systems for browsers. 2 years.
   Total granted: $98,780
   Portion responsible: $69,170

   Validation of non-point nutrient origin of beef manure-P on grazed pasture. 2 years.
   Total granted: $50,000
   Portion responsible: $3,500

4. USDA, Foreign Research Cooperation. 1999. PI. (Co-PI Inacio Maposse, UEM)
   Range legume germplasm collection in Mozambique in cooperation with Eduardo Mondlane University. 3 years.
   Total granted: $30,000
   Portion responsible: $30,000

   Workshop at Eduardo Mondlane University for cooperative US research agenda. One-time.
   Total granted: $31,500

15
Portion responsible: $0

   Dairy comports in silages rotations to improve P cycling in dairies. 2 years.
   Total granted: $23,690
   Portion responsible: $0

   Alternative silage species and rotations for manure-applied P extraction. 1 year.
   Total granted: $10,000
   Portion responsible: $0

Department of Energy. 1998. Collaborator
   Switchgrass for bioenergy production. 5 years.
   Total granted: $708,000
   Portion responsible: $70,000

Pre-A&M System:

3. USAID, Mozambique. 1998. PI.
   Heifer Project International restocking program for Zambézia, Mozambique.
   1 year.
   Total granted: $350,000

2. USAID, Mozambique. 1988. PI.
   Mozambican Ministry of Agriculture host country contract and research program funding. 3 years.
   Total granted: $298,490

   Total granted: 16,340

4. Documentation of research and other scholarly activity

   a. Publications

   Note: those marked by * are (major professor) graduate student, post-doc or technician publications.

   1. Peer-reviewed journal articles

   16


63. *Foster, J.L., J.P. Muir, and B.D. Lambert and D. Pawelek. 2007. In situ and in vitro degradation of native warm-season legumes and alfalfa in goats and steers fed sorghum-
sudan basal diet. Anim. Feed Tech. 133:228-239.


2005. Plant-parasitic nematodes associated with switchgrass (Panicum virgatum L.)


Reed, M.A. Sanderson, B. Venuto and J.R. Williams. 2005. Switchgrass simulation at
diverse sites in the southern U.S. J. Biomass and Bioenergy 29:419-425.

Medicago and Trifolium species in north-central Texas as affected by harvest height.

Biofuel component concentrations and yields of switchgrass in south central U.S.


Summer-Dormant Cool-Season Perennial Grasses for Semiarid Environments of the

rhizobium on herbage of black and button medics. The Texas Journal of Agriculture and
Natural Resources 17:57-71.

Crop Sci. 44:1860-1861.

Crop Sci. 44:1862-1863.

Crop Sci. 44:1863-1864.


2. Non-refereed, editor-reviewed research journal articles


and its effect on subsequent plant development. Leucaena Research Reports, NFTA 12:70-71.


3. Abstracts

   a. Invited

   1. National


   2. International


b. Volunteered

1. National


http://www.usawaterquality.org/conferences/2008/abstracts/Lambert08.pdf


Salt Lake City, UT Nov. 6-10. Agronomy Abstracts (302-7 on CD).


central United States. Agronomy Abstracts. ASA. Indianapolis, IN. (CD disc)


11. Muir, J.P. 1999. Medicago spp. forage and seed production as affected by harvest dates at Stephenville, Texas. Pg. 54, AFGC/SRM Abstracts. AFGC/SRM, Omaha, NE.


35

209 of 281 D


2. International


4. Proceedings Articles

   a. Invited

      1. National

      2. International


   b. Volunteered

      1. National


2. International


On CD.


5. Chapters


6. TAES/TAEX and other producer-oriented publications


7. Abstracts of student presentations within Texas


C. Service activities

a. Percentage budgeted time 0%

b. Type of activity

1. Symposia/workshop coordination

   Tarleton, 2007: “Junior Faculty Researcher A&M System Workshop”
   roundtable facilitator.
   ASA, 1999: “The Role of NGOs in Agricultural Technology Modification,
   Testing and Transfer.”

2. Article/chapter/grant reviews since 1998

   a. Internal: 19 articles

      5 grant proposals

   b. External Journals:
      Spanish Journal of Agricultural Research
      Bioresource Technology
      Plant Science
      Journal of Native Plants
      Advances in Agronomy
      Euphytica
      Agriculture, Ecosystems & Environment
      Revista Scientia Agricola
      Agronomy Journal
      Australian Journal of Experimental Agriculture
      Texas Journal of Natural Resources
      Environmental and Experimental Botany
      Crop Science
      O Agrário
      Journal Communications in Soil Science and Plant Analysis
      Soil and Crop Science Society of Florida
      Journal of Soil and Water Conservation Society
      Journal of Arid Environments
      Journal of Dairy Science
      Grass and Forage Science
      Forage and Grazinglands
      The Southwestern Naturalist

47
Archivos de Zootecnia

Chapters: 4

External Proposals Reviewed: 56 grant proposals
Southern SARE graduate proposals (16) 2008

3. Professional meeting session chair

- ASA Poster Session 2006
- AFGC Poster Session 2006
- ASA, A3 session 2000
- ASA, A6 session 1999
- Grassland Society Southern Africa, 1999

4. Community service

- Court translator, Portuguese/English/Portuguese, 2005
- Texas Rural Development Council, Erath County rural resource team, 1998.
- Stephenville Quest Soccer Club coach:
  1. Quest FC Select Girls, 2003-2006, head coach
  2. Quest FC Select Boys, 2003-2006, assistant coach
- Stephenville Soccer association volunteer coach:
- FIFA and UIL Youth Soccer referee, 1998-2008
- First United Methodist: Chancel Choir, 1998-2002
  Missions Committee, chair 2002, 2000-2003
  Africa University Fundraiser committee, 1998-2002

5. International activities

- Universidade Federal Rural de Pernambuco, Brazil 2009
  - Thesis defense
  - Two seminars

- Huazhong Agricultural College, China 2006
  - Graduate student exchange programs
  - Two seminars

- Zhuhai Agricultural Experiment Station, China 2006

48
• Animal waste P phytoremediation cooperative studies

• Partners of the Americas, Haiti 2006
  • Nutrition of rabbitries

• Centro Internacional de Agricultura Tropical (ACIAR), Colombia 2003
  • Germplasm consultant

• Grasslands Society of Southern Africa
  • Member, 1990-2006
  • Volunteer paper and poster presented, Congress 1999 & 2002
  • Session moderator, 1999
  • 12 papers/posters presented
  • 5 articles published

• International Grasslands Congress
  • China: Two volunteer posters presented, 2008
  • Ireland: Two volunteer posters presented, 2005
  • Brazil: Two volunteer posters presented, 2001

• International Herbivore Congress
  • Malaysia: One volunteer paper, 1996
  • USA: Two volunteer posters, 2000
  • Mexico: Two volunteer posters, 2003

• International Conference on Goats
  • Mexico: One volunteer paper, 2008

• Universidade Eduardo Mondlane
  • NSF Cooperative workshop coordinator, 1999
  • USDA Foreign Cooperation grant, 1999-2002
  • Fulbright, 1988

• Tropical Grasslands Society of Australia
• Member since 1990
• Three peer-reviewed articles published

• **International Rangeland Congress**
  - China: Two volunteer talks presented, 2008
  - South Africa: One invited paper co-authored 2003
  - South Africa: Two volunteered posters 2003

d. **Texas AgriLife Extension activities**

Since 1997 but especially during the periods when TCE Forage Specialist position was vacant, I have furnished information and expertise to District 8 producers. This entailed answering producer and agent questions, giving producer talks and carrying out producer-oriented field research and demonstration plots.

1. **Producer presentations**

• Maturity affects phosphorus digestibility in forages fed to dairy cows, Dairy Field Day, DeLeon, 2009
• Legumes for the Cross Timbers, Soil Conservation District, Stephenville, 2009
• Forage systems for goat production, Extension, Fairfield, 2009
• Forage systems for goat production, Extension, Waco, 2008
• Cool season annual forages for high-phosphorus soil phytoremediation. Dairy Field Day, 2007
• “Legumes in North Texas” AFGC, 2006
• Radio 89.7, “Hunting Camp” talk on white-tailed deer forages, 2005
• Famacha goat parasite monitoring systems, Comanche & Erath, 2005
• Cultivated pastures for goats, Comanche, 2004
• Cross Timbers Soil & Water Conservation District Dairy P, 2004
• Waco Native Plants Society presentation, 2004
• Domesticating native herbaceous legumes, Texas ASA, 2004
• Hay and pasture systems for goats, Comanche, 2003
• Harvest maturity for sorghum silages, Comanche, 2001
• Sorghum-sudans for hay, Comanche, 2001
• Cultivated cool-season pastures for goats, Comanche, 2001
• Legumes for forage production, Agronomy Club, TSU, 2000
• Forages for wildlife, Wildlife Club, TSU, 2001
• Forages for Deer, Comanche Kiwanis Club, 2000
• Winter legumes for Deer, Erath SCS, 2000
• Alternative broadleaf silages, Comanche, 1999
• Alternative grass silages, Comanche, 1999
• Hay Quality, Gatesville, 1998

50
• Tifton 85, Gatesville, 1998
• Small grains for Forage, McGregor, 1998

2. County research/demonstrations

• Corn variety trials, Comanche and Erath, 1998-2002
• Sorghum variety trials, Comanche and Erath, 1998-2002
• Sorghum-sudan variety trials, Erath, 2000-2002
• Alfalfa variety trial, Comanche, 1998-1999, 2002-2004
• Cool season forages for phosphorus extraction, Erath, 2006

3. Producer Contacts

2007-2008: 127
2006-2007: 250

7. Administrative duties

a. Percentage budgeted time: 0%

b. Type of duties: Stephenville safety officer, 1998-2001

c. Committee assignments:
• Chair Stephenville AgriLife lab use committee, 2009
• Texas AgriLife Research D. Rowland mentoring committee, 2009-2013
• Chair Stephenville AgriLife outdoor facilities committee, 2009
• Department of Soil & Crop Science Faculty Advisor committee, 2009
• Texas AgriLife Research Laboratory and Outdoor Facility Committee Chair, Stephenville 2009
• Texas AgriLife Research McGahan mentoring committee, 2008-2012
• Texas AgriLife Research Beeville Forage position, 2008
• TAMU College of Agriculture Promotion & Tenure committee, 2007-2008
• Search committee, TAES/Tarleton soil scientist, 2007-2008
• Agriculture Faculty Advisory Committee (AFAC), TAMU 2007-2009
• Texas Forage Worker’s Executive committee, 2005-2007
• Agricultural Conference Advisory Committee, College Station, 2007
• Search committee, co-chair, TCE agronomist, Stephenville, 2005
• Search committee, TCE agronomist, Stephenville, 2000
• Stephenville AREC strategic plan committee, 2000
• Tarleton dairy search committee, 2002
• Tarleton Ag Farm Committee, 2002-2003

8. Professional and scientific society activities

51
a. Organizations

1. American Agronomy Society:
   - Bob Barnes Student Oral Competition chair, 2009
   - C6 (Crop Science Forage Section) division chair, 2008
   - Poster Session Chair, 2006
   - Symposium organizer "101 Forage Uses: Beyond the Cow"
   - Member 1998-2009
   - Associate editor, 2003-2009
   - Invited speaker, Texas Chapter, 2004
   - Agronomy and Crop Science Journal manuscript reviewer
   - A6 symposium organizer, 1999
   - 19 articles published
   - 23 posters/papers
   - 2002 Editors’ Citation for Excellence in Manuscript Review, Agronomy J.
   - 2005 Bob Barnes Graduate Oral Paper Competition judge

2. Tropical Grassland Society of Australia
   - Member 1993-2005
   - 2 articles published

3. Grassland Society of Southern Africa
   - Member 1990-2005
   - Paper session moderator, 1999
   - 4 articles published
   - 12 posters/papers presented

4. Texas Forage Workers’ Group
   - Member since 1998
   - Secretary 2000
   - President 2001
   - Annual meeting chair 2001
   - Ag Conference meeting chair 2001
   - Presentations at annual meetings/Ag conferences: 5

5. American Forage and Grassland Council
   - Member since 1998
   - Poster session chair, 2006
   - "Legumes for North Texas" symposium talk, 2006
   - Presentations at annual meetings: 7
   - Proceedings papers published: 2
b. Paid consulting: none since 1997

9. Collaborative programs

Since starting up the forage project at Stephenville, collaborative projects (grant proposals, research and extension) were carried out with the following persons:

Texas AgriLife Research

- J. Foster, Beeville. Grant applications and multi-site field research.

- R. Jones: our cooperation focused on Ron’s previous involvement with switchgrass work as well as dairy effluent management.

- W. Ocumpaugh, Beeville: with our mutual interest in native and naturalized medics and cooperation with switchgrass biomass production, distance and differences in climates have added to the value of cooperative work.

- M. Hussey, C. Station: although Mark is primarily interested in grasses, there was cooperative work that involved Stephenville as a northern plot site.
  1. Switchgrass biomass
  2. *Eragrostis*

- D. Vietor, C. Station: with urban markets for milk and turf close by, a multi-site study on how to bring these two industries together has been established.
  1. Dairy manure P removal by turfgrass production (SARE dependent)
  2. AGR 612 module development

- M. Rouquette, Overton; H. Lippke, Uvalde: interest in studying the plant:animal interface for winter perennial grasses has resulted in a multi-site study.
  1. Winter perennial grass persistence under grazing
  2. BRI grant to organize statewide data on manure P management

- J. Read, Dallas: James has grass germplasm with good potential for Stephenville that should be tested over the next few years.
  1. Winter perennial grass persistence under grazing
  2. Dairy manure P removal by turfgrass production

- D. Malinowsky, Vernon: multi-site experiments that include:
  1. Harvest intensity of cool-season legumes
  2. Tall fescue drought hardiness
  3. Native warm season legumes
• T. Fojik, horticulture, Stephenville: Toby's wildlife interests have resulted in legume work for wildlife.
  1. Three county establishment of summer forbs for wildlife
  2. Three county establishment of winter forbs for wildlife

• B. Lambert, dairy nutrition, Stephenville: there is a natural connection between dairy nutrition needs in the Cross Timbers and forage development
  1. 319 grant proposal development
  2. NWQP grant proposal
  3. Graduate students in goat nutrition

• M. Belota, Lubbock: native perennial legumes

Texas AgriLife Extension

• J. Tomberlin, Stephenville (TCE, livestock entomology): dairy phosphorus cycling research.

• E. Prostko, Stephenville (TCE, retired): cooperation with Eric Prostko was important since it answered many producer silage questions and resulted in numerous producer-oriented publications.

• T. Nennich (TCE, dairy nutritionist at Stephenville) and S. Stokes, (retired): cooperation with the TCE nutrition program has been very important since our work focuses on dairy producer questions concerning forage-based nutrition and, more recently, the use of forages to recycle manure P.

• T. Butler, Stephenville (TCE, retired): cooperated on establishing field trials, procuring funds, and publishing articles for our cooperative research program.

• M. McFarland, PI for compost marketing trials in District 8
  1. Coastal bermudagrass and dairy manure-P
  2. Establishment and yields of wheatgrass
  3. Graduate committee for Hefton, MSc TAMU

• J. Pope (Erath, retired), Robert Scott (Erath), Lyle Zoeler (Coryell) & B. Whitney (Comanche): our cooperative work involves silage, forages for wildlife, and dairy waste for pasture questions posed by these agents who head up on-farm research efforts.

• N. Wilkins, C. Station: joint efforts in answering wildlife producer questions in the CrossTimbers area have become a part of our forages-for-wildlife work. This
includes grants that have, so far, not been approved.

- Y. Newman, Stephenville Forage Specialist. Cooperating on web pages, applied research, and grant applications.

- J. Tomberlin, livestock entomologist, Stephenville
  1. Research efforts on soldier fly use of dairy manure

- S. Mukhtar, agricultural engineer, College Station
  1. USDA & EPA grants
  2. Dairy P cycling research (edge-of-field monitoring)

- C. Hart, rangeland ecologist, Stephenville
  3. AFRI grants
  4. CEAP rangeland effects on surface water quality

Texas A&M System

- R. Wittie, Tarleton State: the primary focus of this cooperation has been with undergraduate fieldwork at Stephenville as well as graduate students in range/forage science. Cooperated on 3 successful grant applications.

- B. Lambert, Tarleton State: graduate student committees, grants and publications.

- R. Rosiere, Tarleton State: cooperation has focused on graduate student research in range/forage science.

- D. Weindorf, Tarleton State: cooperation has focused on graduate student research in soil/forage science.

- R. Harp, Tarleton State: cooperated on graduate committees with goat research emphasis.

- T. Brown, Tarleton State: successful ATP grant, M.Sc. co-chairs and subsequent articles

- Mark Yu, Tarleton State: successful USDA grants

- James Hauser, TIAER, Tarleton State: grant application

- Paula Maywald, South Texas Natives, Kingsville: grants and native seed production
Outside Texas A&M

National

- T.J. Butler, Noble Foundation, Ardmore OK. Cooperative efforts to domesticate native herbaceous legumes for forage use.
  1. Seed multiplication of trailing and smooth wildbean
  2. Germplasm selection among native perennial legumes
  3. Evaluation of winter legumes in switchgrass

- W.D. Pitman, LSU: a SARE preproposall was submitted together. Cooperative work with multi-location studies of native perennial legumes has been initiated:
  1. Establishment of Desmanthus spp in bermudagrass sod
  2. Seeding rate and P effects on Armadillo burr medic establishment

- R. Reed, Angelo State: ATP proposal submitted together. Cooperative work with multi-location studies:
  1. Strophostyles spp. productivity
  2. Seeded bermudagrass
  3. Co-authored articles

- M. Sanderson, USDA-ARS: much of Matt’s switchgrass work at Stephenville continues and should result in valuable, long-term studies on management of this useful native perennial.

- P. Desanker, UV: Paul headed up the NSF worship grant for Universidade Eduardo Mondlane for which I was a co-PI.

- T. Stratton, AGRESEARCH, Georgia: testing tall fescue varieties for drought tolerance.

- Turner Seed Co, Breckinridge, TX: cooperation exists with Turner in both procuring grants for small-scale seed production as well as testing ‘Estes’ button medic in North Texas.

- Phosphorus and Potash Institute: P research for legumes & grasses, including grant

- C. Taliaferro, OSU: Switchgrass germplasm multi-location evaluation at Stephenville.

- G. Aiken, USDA-ARS, Boonesville, AR: cooperation exists in grant submission, manuscript review and future research plans.
• M. Adjei, UF, Fl: co-authors on a book chapter related to the latest research efforts in African Forage.

• L. Sollenberger, UF, FL: authored a book chapter being edited by Sollenberger.

• C. Webber, USDA-ARS: forage kenaf germplasm evaluation.

• Elide Valencia, University Puerto Rico: tropical forages and goats.

• Tom Terrill, Fort Valley State University: weed control using goats; condensed tannins in native legumes.

• Byron Burson, USDA-ARS: grass germplasm evaluation.

• Stuart Weiss, University USVI: tropical forages and goats.

• Mike Miller, Texas Parks & Wildlife: North Texas Ecotype Project

• Joen Burke, USDA-ARS Arkansas, using high-tannin forages for organic control of gastro-intestinal parasites in small ruminants

• Mary Williams, USDA-ARS Florida, use of small ruminants to control invasive plants

• Lisa Boggs, Oklahoma Southwest University, Weatherford OK, use of small ruminants to control invasive plants

• John Lloyd-Reilley, NRCS PMC Kingsville, seed production of native south-Texas grasses.

• Jim Miller, Lousiana State University Vet School, gastro-intestinal control using condensed tannins of legume origin.

• Maria Silveira, University of Florida, tropical grasslands as carbon sinks. NSF grants and work in Brazil

International

• I. Maposse, Universidade Eduardo Mondlane, Mozambique: with USDA funding available, previous contacts with Mozambique resulted in cooperative germplasm collection and pasture science data collection in Mozambique.

• A. Alage & O. Faftine, Instituto de Producao Animal, Mozambique: as data and
experiments in warm-season forages in Mozambique mature, data analysis and publication will continue in the areas of range production and re-enforcement.

1. Productivity and quality of native grasses on 2 soils of Maputo Province.
2. Effect of 4 tree species’ shade on savannah herbaceous layer.

- A. Elgersma, Wageningin University, The Netherlands: cooperation has focused on assisting Ezedeen Osman (Eritrea) in his research thesis.
- L. Jank, EMBRAPA, Brazil: co-authors on a book chapter reviewing guinea grass.
- Bruce Pengelly, U. Queensland, Australia: tropical legumes and co-authored invited paper at IRC, South Africa.
- Monica Cornichioni, INTA, Santiago del Estero, Argentina. Sub-tropical forage production.
- Jose Aroquay, INTA, Santiago del Estero, Argentina. Plant secondary compounds and their effect on ruminant digestion.
- John Githiori, ILRI, Nairobi, Kenya. Plant secondary compounds and their effect on ruminant internal parasite suppression.
- Caroline Wambui, Egerton University, Njoro, Kenya. Plant secondary compounds and their effect on ruminant internal parasite suppression; Borlaug LEAP Fellowship.
- Horacio Petruzzi, INTA, Argentina. Sub-tropical perennial grass production for forages and biofuels.
- Jose Dubeux, Universidade Federal Rural de Pernambuco. Grassland use for carbon sequestration and forages. NSF grant.
FACULTY CREDENTIALS/QUALIFICATIONS

Name
Edward Osei

Area of Expertise/Interest
Agricultural Economics – Natural resource and environmental economics; computer modeling

Education
Ph.D., Iowa State University (Agricultural Economics), 1994.
B.S., University of Ghana (Agricultural Economics), 1989.

Professional Experience
Senior Research Economist; Texas Institute for Applied Environmental Research; Tarleton State University; Stephenville, Texas: January 2000 - Present.

Computer modeling and other research efforts to support environmental policy analysis and other issues related to agriculture and the environment. Developed CEEOT-MMS [Comprehensive Economic and Environmental Optimization Tool – Macro Modeling System], a macro modeling system designed to simulate the economic and environmental impacts of policies and practices related to agriculture and the environment over large regions or the entire nation.

Computer modeling and other research efforts to support development of CEEOT-SWAPP, a flexible integrated and automated version of CEEOT that is particularly useful for non-academic audiences. Developing an urban economic model in order to extend the efforts of TIAER to urban watersheds.

Application of computer models and other economic and statistical tools for evaluating policies and practices for small and large watersheds and large regions. Provided technical support to inform EPA and USDA of the costs and capabilities of State and federal agencies for Comprehensive Nutrient Management Plan (CNMP) oversight.

Research Economist; Texas Institute for Applied Environmental Research; Tarleton State University; Stephenville, Texas; January 1996 - December 1999.

Computer modeling and other research efforts to support environmental policy analysis, with particular emphasis on livestock and crop operations. Developed Farm-level Economic Model (FEM), a flexible farm-level model designed to simulate the economic impacts of alternative policies or practices related to agriculture.

Application of computer models and other tools and economic and statistical methods to evaluate policies and practices for small and large watersheds.

Computer modeling and other research efforts to determine economic impacts of structural and managerial practices related to livestock operations in the U.S.


Research to support environmental policy analysis, with emphasis on livestock and the environment.


Research to support efforts of the Leopold Center for Sustainable Agriculture. Research included economic analysis of alternative cropping and tillage systems.

Part-time Lecturer, Valley View College, Accra, Ghana, 1990.

Taught classes in Pre-calculus and Principles of Economics

Teaching and Research Assistant, University of Ghana, Legon, Ghana, July 1989 – August 1990

Taught classes in undergraduate agricultural economics. Supported research efforts relating to economic development of Ghana.

Current Active Research Projects

Economic evaluation of alternative tillage practices for farms in the Fort Cobb Creek watershed, Oklahoma, in collaboration with the USDA-ARS El Reno, OK office.

Application of CEEOT-SWAPP to evaluate alternative practices for selected watersheds in Alberta Canada (Pending)

Development of an urban economic model for evaluating the economic impacts of land use changes and other practices related to urban areas.

Enhancement of CEEOT-SWAPP to increase its use by non-academic interests.
Research Grants (career)

Research/Technical Publication Record

Refereed Journal Articles


Books and Book Chapters
None

Other Peer-Reviewed Publications

Other Publications


Papers Presented at Professional Meetings


Posters at Professional Meetings
None

Graduate Courses Currently Teaching
None

Graduate Students Completed
None

Involvement in Collaborative Projects as Member of Research Team
All research projects mentioned above have been collaborative in nature

Other Pertinent Information
Helped teach various undergraduate economics classes at Tarleton as the need arose.
RESEARCH INFRASTRUCTURE

Physical Facilities (both indoor and outdoor)

Specialized Research Equipment

GRADUATE ASSISTANTSHIPS/SCHOLARSHIPS AND OTHER GRADUATE SUPPORT AVAILABILITY
Ali Saleh, Ph.D.

209 Logan Lane
 Stephenville, TX 76401
 Telephone: (254) 968-9799
 E-mail: saleh@tiae.tarleton.edu

Education

Doctor of Philosophy, Utah State University (Soil Physics and Agricultural Engineering), 1987
Master of Science, California State University (Agriculture), 1982
Bachelor of Art, Tehran University (General Law), 1978

Experience Summary

Job Title: Environmental and Economic Modeling Coordinator
Employer: Texas Institute for Applied Environment Research (TIAER),
Tarleton State University. 201 St. Felix. Stephenville, TX 76401
Starting and Ending Date: 1997 – Present

Duties and Accomplishments:

I am currently the associate director and research coordinator of a multidisciplinary team of
scientists, economists, and engineers at Texas Institute for Applied Environment Research
(TIAER). My main focus during the past eighteen years has been to enhance, develop, and
evaluate environmental and economic models. Some examples of these models are SWAT (Soil
and Water Assessment Tool), HSPF (Hydrological Simulation Program-FORTRAN), APEX
(Agricultural Policy/Environmental eXtender), and FEM (Farm Economic Model). Some of my
current projects are: refinement of SWAT for better simulation of tile drain and pothole systems;
modifications of APEX and SWAT to simulate the soil and hydrologic conditions of forested
lands; comparison and evaluation of SWAT and HSPF; and application of SWAT and APEX to
various watersheds to evaluate the environmental and economic impact of land management
practices at the field and watershed levels. I recently developed the SWAPP (SWAT/APLEX
Program) to run SWAT and APEX models simultaneously in order to simulate the detailed field
conditions by APEX within a watershed. In addition, I am leading a project to evaluate the effect
of brush control on water quantity under arid condition. I have initiated, organized, and chaired
several national and international conferences and workshops on water quality and Total
Maximum Daily Load (TMDL) issues. I have also prepared and taught several lectures for
Tarleton State University students. I have written numerous collaborative proposals for project
funding from various sources. Finally, I have published and presented my research results in
scientific journals and societies.
Job Title: Soil Physicist  
Employer: USDA-Agricultural Research Service  
Starting and Ending Date: 1990 – 1997

Duties and Accomplishments:

At the USDA-Agricultural Research Service, I designed and conducted research related to wind and water erosion. I am the main author of the RWEQ (Revised Wind Erosion Program), currently available through the USDA-ARS Internet web-site. I have published and presented my research results in scientific journals and societies. I collaborated with other colleagues in developing other erosion models such as WEPS (Wind Erosion Prediction System), RUSLE (Revised Universal Soil Loss), and WEEP (Water Erosion Prediction Project).

Job Title: Instructor  
Employer: Salt Lake Community College  
Starting and Ending Date: 1989 – 1990

Duties and Accomplishments:

My major tasks at Salt Lake Community College included:
- Preparing and teaching courses in calculus, geometry, and statistics,
- Students evaluation and advising, and
- Developing course outline and syllabi.

Publications and Meeting Proceedings


Project Reports


Meeting Chairman and Organizer:

♦ Organizer and Chairman of “Third Conference on Watershed Management to Meet Water Quality Standards and Emerging TMDL (Total Maximum Daily Load) and Exhibition”. Atlanta, Georgia. March 5-10, 2005.


♦ Organizer and Chairman of “Agricultural TMDL Development” Workshop. ASAE Annual meeting, Milwaukee (WI), July 7, 2000.

♦ Past Chairman of “Environmental Quality Coordinating” Committee at American Society of Agricultural Engineering (ASAE).

♦ Past Chairman of “Pollution by Sediment” Committee at American Society of Agricultural Engineering (ASAE).
Affiliations

◆ American Society of Agricultural Engineers
◆ American Society of Agronomy
◆ S1004 committee member

Awards

◆ USDA-ARS Spot Award for coding Revised Wind Erosion Equation (RWEQ) model
◆ 2002 ASAE President's Citation Award for identifying the need for and developing the first Total Maximum Daily Load (TMDL) conference
◆ 2002 Leadership Awards from both ASAE Soil and Water Division and the ASAE Meeting Council
◆ 2002, 2004, and 2005 ASAE Presidential Leadership Award

Secured Funding

◆ 1999, Sny Magil Watershed, Iowa (Department of Natural Resource Funding) ($25,000)
◆ 2000, Walnut Creek Project USDA-ARS (CSREES Funding) ($115,000)
◆ 2000, Mineral Creek, Iowa (Section 406 of the AREERA) ($83,000)
◆ 2001, Maquoketa Watershed, Iowa (CSREES Funding) ($12,000)
◆ 2001, Upper Colorado River Authority, Texas (Texas Soil Board Funding) ($112,000)
◆ 2002, Carter and Burgess Co., Texas ($16,000)
◆ 2003, Upper Colorado River Authority, Texas (Texas Soil Board Funding) ($80,000)
◆ 2004, Upper Colorado River Authority, Texas (Texas Soil Board Funding) ($150,000)
◆ 2004, Walnut Creek Project, Iowa (USDA-ARS Funding) ($50,000)
◆ 2005, Walnut Creek Project, Iowa (USDA-ARS Funding) ($20,000)
◆ 2005, NCASI Forestry Project, Texas ($45,000)
◆ 2006, NCASI Forestry Project, Texas ($20,000)
◆ 2007, NCASI Forestry Project, Texas ($20,000)
◆ 2007, Upper Colorado River Authority, Texas (Texas Soil Board Funding) ($120,000)
◆ 2008, NCASI Forestry Project, Texas ($20,000)
◆ 2008, Alberta Agriculture Department, Canada ($190,000)
◆ 2008, USDA-NRCS Conservation Innovation Grant ($57,000)
Dr. Carol A. Thompson
Tarleton State University
Division: Academic Affairs: College of Science and Technology
Chem, Geosc, & Evn Sciences
(254) 968-9739
Email: CTHOMPSON@TARLETON.EDU

Education

Ph D, University of Iowa, 1993.
  Major: Geology
  Dissertation Title: Hydrogeology of Iowa Fens

MS, University of Illinois at Chicago, 1984.
  Major: Geology
  Dissertation Title: Experimental Determination of Phase Relations in the System Magnetite-
    Apatite

BS, University of Illinois at Chicago, 1978.
  Major: Geology

Administrative Assignments

  Department Chairperson, Department, September 2004 - Present.
  Responsibilities: In charge of 10 faculty in three areas - Chemistry, Geosciences (both BS
    level) and Environmental Science (MS level)

Professional Positions

Academic

  Associate Professor, Tarleton State University. (September 1998 - Present).

  Adjunct Professor, University of Iowa. (January 1994 - August 2000).

Government


Faculty/Staff Rank

  Starting Rank: Associate Professor (September 1998)
  Tenure Decision: 2005

Licensures and Certifications


Professional Memberships

  American Geological Institute.
American Water Resources Association.
Geological Society of America.
National Groundwater Association.
TSU chapter treasurer, 2005-2005, Sigma Xi.
Soil and Water Conservation Society.
Section Chair 2005, 2007, Texas Academy of Science.
SC Regional Board member, Society of Wetland Scientists. (1989 - Present).

Development Activities Attended

Self-Study Program, "Intro to Arc 9 Geostatistical Analysts," ESRI. (August 6, 2009).
Conference Attendance, "Society of Wetlands Scientists' regional meeting (student paper judge)," Society of Wetlands Scientists. (October 2008).
Conference Attendance, "2008 Joint Annual Meeting Celebrating the Year of Planet Earth," GSA, SSSA, ASA, CSSA, GCAGS, HGS. (October 5, 2008 - October 8, 2008).
Conference Attendance, "Texas Academy of Science," Texas Academy of Science (section chair). (February 2008).
Conference Attendance, "Society of Wetlands Scientists' regional meeting," Society of Wetlands Scientists. (October 2007).


Conference Attendance, "Texas Academy of Science Conference," Texas Academy of Science. (February 2007).

Conference Attendance, "Texas Academy of Science," Texas Academy of Science. (February 2006).

Tutorial, "Introduction to Arc View Spatial Analyst," ESRI. (November 18, 2005).


Workshop, "Introduction to ArcGIS survey analyst," ESRI. (November 2, 2005).

Conference Attendance, "Society of Wetland Scientists' regional meeting (section chair)," Society of Wetland Scientists. (October 2005).


Conference Attendance, "Texas Academy of Science," Texas Academy of Science. (February 2005).


Conference Attendance, "Big Thicket Science Conference." (October 2003).

TEACHING

Teaching Experience

Tarleton State University
E S 413, Environmental Techniques, 1 course.
E S 484, Earth Science Internship, 2 courses.
ENVS 529, Appl of GIS in Env Science, 2 courses.
ENVS 586, Prob:Environmental Techniques, 2 courses.
ENVS 588, Thesis, 6 courses.
ENV 590, Tpcs: Wetlands, 2 courses.
GEOL 105, Physical Geology, 2 courses.
GEOL 310, Geomorphology, 2 courses.
GEOL 320, Hydrogeology, 1 course.
GEOL 486, Problems-Advanced GIS, 1 course.
GEOL 586, Problems-Env Geology, 1 course.

Directed Student Learning

Master's Thesis Committee Chair, Chem, Geosc, & Evn Sciences. (2009 - Present).
Advised: Sadina Mayeux

Master's Thesis Committee Chair, "Metals in Sea Turtle eggs on Las Perlas Islands, Panama,"
Other (Within Tarleton State University). (2007 - Present).
Advised: Melina Lopez

Master's Thesis Committee Chair, "Salt Cedar water use and potential salvage from control."
Advised: Will Hatler

Advised: Mahendra Dia

Master's Thesis Committee Chair, "Reconstruction of historical trophic gradients from diatoms."
(December 2007).
Advised: Teresa Sykes

Master's Thesis Committee Member, "Occurrence, Reproduction and Poulation Genetics of the
Estuarine Mud Crab Rithropanopeus Harrisii in Texas Freshwater Reservoirs," Other (Within
Advised: Terrence Boyle Jr.

Master's Thesis Committee Member, "Spatial Variability of soil test phosphorus in North Central
Advised: Anil Somenahally

Master's Thesis Committee Member, "Soils, hydrology, vegetative ecology and floristics of natural
and constructed wetlands along the Leon River in the West Cross Timbers, Comanche Co,
Texas," Other (Within Tarleton State University). (April 2005).
Advised: Jeff Birster

Master's Thesis Committee Chair, "Influence of water quality and flow regime on aquatic insect
diversity in the North Bosque River.," Other (Within Tarleton State University). (2002).
Advised: Jeff Back

Master's Thesis Committee Member, "Genetic variation among three populations of
Rithropanopeus Harrisii from freshwater reservoirs in Texas," Other (Within Tarleton State
University). (December 2001).
Advised: Michael Votaw

Dissertation Committee Member, "An evaluation of wetlands for wastewater treatment, Iowa City,
Advised: Lori Goetsch
Master's Thesis Committee Chair, "Phosphorus removal in riparian wetland used for wastewater treatment," Other (Within Tarleton State University). (2000).
Advised: William Crump

Advised: Cladia Sartini

Master's Thesis Committee Member, "Hydrogeology of wetlands at Camp Dodge," Other (Outside Tarleton State University). (1997).
Advised: Mary Clare Jones

Advised: Mark Morton

RESEARCH

Published Intellectual Contributions

Refereed Journal Articles


Other


**Presentations Given**

Martinez, D. M. (Presenter & Author), Thompson, C. A. (Presenter & Author), Excellence in Teaching Conference, "End-of-Course Evaluation Form: A Program Assessment Tool for Faculty," Tarleton State University, Stephenville, TX. (March 27, 2009).

Thompson, C. A. (Presenter & Author), McFarland, A. (Author Only), Texas Academy of Science annual meeting, "SURFACE AND GROUNDWATER INTERACTIONS VIA STREAM BANK SEDIMENTS: POTENTIAL SINKS AND SOURCES OF PHOSPHORUS IN A EUTROPHIC HEADWATER STREAM," Texas Academy of Science, Junction Texas. (March 6, 2009).

Martinez, D. M. (Presenter & Author), Thompson, C. A. (Presenter & Author), 9th Annual Texas A&M Assessment Conference, "End of Course Evaluation Form: A Program Assessment Tool for Faculty," Texas A&M University, College Station, TX. (February 23, 2009).


Thompson, C. A., "Hydrogeomorphic analysis of muck wetlands at Gus Engelng Wildlife Management Area, Anderson County, Texas.,” Society of Wetland Scientist’s International Meeting. (July 2006).

Thompson, C. A., "Hydrogeomorphic analysis of muck wetlands at Gus Engelng Wildlife Management Area, Anderson County, Texas.,” Texas Academy of Science, Kerrville, TX, Kerrville, TX. (March 2004).


Thompson, C. A., "Geological Controls on Nitrogen Movement in the South and Middle Bosque Basins," Texas Academy of Science state meeting, Laredo, TX. (April 2002).


Thompson, C. A., "Walnut Creek watershed restoration and water quality monitoring project," Clarke College, Dubuque, IA. (1997).


Thompson, C. A., Hydrogeology of Fens, "Hydrogeology of Fens," Iowa State University departmental seminar. (October 1994).


Thompson, C. A., Johnson County Water Education Team, "Johnson County Water Education Team," Mason City, IA. (January 1994).


Thompson, C. A., Midwest Ground Water Conference, "Hydrogeology of Two Iowa Fens," Champaign, IL. (October 1993).

Thompson, C. A., University of Northern Iowa departmental seminar, "Hydrogeology of Fens." (February 1993).

Thompson, C. A., Iowa Academy of Science Meeting, "DeSoto NWR demonstration and education project," University of Northern Iowa, Cedar Falls, IA. (April 1992).


Contracts, Grants and Sponsored Research

Contract

Thompson, Carol Ann (Principal), McFarland, Ann (Co-Principal), Neill, Margaret, "Headwaters Study: Monitoring to Support North Bosque River TMDL Modeling Refinements," Sponsored by TIAER, Tarleton State University, $25,000.00. (2004 - 2005).

Thompson, Carol Ann (Co-Principal), Richard, Kiesling (Co-Principal), Teresa, Sykes (Supporting), "Reconstructing Reservoir Trophic Status using Paleolimnological and Geochemical analyses of Sediment Cores," Sponsored by EPA, Federal, $189,700.00. (2003 - 2005).

Thompson, Carol Ann (Co-Principal), Easterling, Nancy (Co-Principal), "South and Middle Bosque 319 Assessment project," Sponsored by TIAER, Tarleton State University. (2000 - 2002).
Thompson, Carol Ann (Principal), "Source Water Protection," Sponsored by Iowa Department of Natural Resources, State, $1,500,000.00. (1997 - 2002).


Thompson, Carol Ann (Principal), "Wellhead State Plan," Sponsored by Iowa Department of Natural Resources, State, $400,000.00. (1996 - 1998).


Grant

Thompson, Carol Ann (Supporting), Muir, Jim (Principal), Dittus, Dean (Supporting), "An Integrated Approach to Increasing Water Capture," Sponsored by USDA-NWQIP, Federal, $600,000.00.


Thompson, Carol Ann (Co-Principal), Wang, XiXi (Co-Principal), "Ecohydrology Field Research - Inner Mongolia and Central Texas," Sponsored by NSF, Federal, $19,210.00.

Petronis, Janis Faye, Rinard, Bethany Dawn, Stanley-Stevens, Leslie, Thompson, Carol Ann, Pawlak, Ann, "Opportunities for Enhancing Diversity in the Geosciences," Sponsored by National Science Foundation.

Thompson, Carol Ann (Supporting), Cawthon, Donald Loyd (Principal), Drueckhammer, David C. (Supporting), Wittie, Roger D. (Supporting), Jafri, Hussein (Supporting), Ball, Betsy (Supporting), "Short Course Development: Perspectives on Agricultural Water Management in China," Sponsored by USDA-CREES, Federal, $99,949.00. (2008).


Thompson, Carol Ann (Co-Principal), Weindorf, David (Co-Principal), Schultz, Linda D. (Co-Principal), "Acquisition of an Inductively Coupled Plasma Atomic Emission Spectrometer (ICP-AES),," Sponsored by NSF, Federal, $107,701.00. (June 1, 2003 - August 1, 2006).


Thompson, Carol Ann (Co-Principal), Amon, Jim (Co-Principal), "Ecosystem structure and function at the fen boundary;," Sponsored by NSF, Federal, $400,000.00. (2001).


**Sponsored Research**

Thompson, Carol Ann (Principal), "Metals in the Environment," Tarleton State University, $8,002.00. (2005 - 2006).

Thompson, Carol Ann (Principal), "A study of the effect of PL-566 reservoirs on water quantity and quality in the Erath County area," Tarleton State University, $14,520.00. (1999 - 2001).

**Intellectual Contributions in Submission**

**Journal Articles**


**Research in Progress**

"CCLI grant" (Planning)  
NSF-sponsored grant proposal to develop new web-based laboratory materials for Physical Geology.

"Groundwater Surfacewater Interaction in Headwater Streams" (Writing Results)  
Writing results of two year field study on phosphorus sorption in banks

"Hydrogeology of Western Gulf Coast Bogs" (On-Going)  
Early stage of manuscript of previous work; working with two new graduate students to start new projects

"Recharge Rates in Semi-arid regions" (Planning)  
Develop field areas here and potentially abroad to look at recharge, grassland restoration, water yield

**SERVICE**

**College Service**

Committee Member, COST curriculum. (2003 - 2005).

Committee Member, Research Advisory. (2001 - 2004).

**University Service**

Committee Member, Academic Council.

Committee Member, Graduate Council. (2000 - Present).
Committee Member, Health and Environmental Safety. (2000 - Present).
Committee Member, Facility Construction and Improvement. (2000 - 2004).
Committee Member, Faculty Senate. (1999 - 2002).

Professional Service

Reviewer, Journal Article, JAWRA, Wetlands, Pedosphere.
Vice Chair, Texas Academy of Science, Texas. (March 2009).
Session Chair, Texas Academy of Science. (2007 - 2008).
Officer, Treasurer, Sigma Xi. (2004 - 2006).
Task Force Member, Western Gulf Coast Bogs. (2003 - 2006).
Session Chair, Texas Academy of Science. (2004 - 2005).
Officer, Vice President, Iowa Natural History Association, Iowa. (1995 - 1996).

Public Service

Committee Member, Water Conservation Committee, Stephenville, TX. (2009 - Present).
Volunteer, USGS. (1990 - Present).
Committee Chair, Water Conservation Committee, Stephenville, TX. (2004 - 2009).
Technical advisor, City of Iowa City-Planning and Zoning. (1993 - 1996).

Consulting


Awards and Honors

Service, Professional

Fellow, Iowa Academy of Science. (April 24, 1998).
Name: Dr. Xixi Wang, P.E.

Area of Expertise/Interest: (see the attached vita)

Education: Ph.D. (Soil and Water in Ag. Engineering) (see the attached vita)

Professional Experience: (see the attached vita)

Current Active Research Projects: (see the attached vita)

Research Grants: (career) (see the attached vita)

Research/Technical Publication Record: (see the attached vita)

- Refereed Journal Articles
- Books and Book Chapters
- Other Peer-Reviewed Publications
- Other Publications

Papers Presented at Professional Meetings (see the attached vita)

Posters at Professional Meetings (see the attached vita)

Graduate Courses Currently Teaching (see the attached vita)

Graduate Students Completed (see the attached vita)

Involvement in Collaborative Projects as Member of Research Team (see the attached vita)

Other Pertinent Information (see the attached vita)

RESEARCH INFRASTRUCTURE

Physical Facilities (both indoor and outdoor)

My "Fluids Lab" has equipments to serve teaching activities related to hydrology, hydraulics, soils, and water quality.

Specialized Research Equipment

I am planning to develop a research lab for watershed modeling and GIS applications.
Dr. Xixi Wang
Registered Professional Civil Engineer (#5145)

Assistant Professor
Department of Mathematics, Physics & Engineering
Tarleton State University, Box T-0390, Stephenville, TX 76402
Tel. 254-968-9164 (O), Email: xxqwang@gmail.com

RESEARCH AND TEACHING INTERESTS

- Hydrologic and hydraulic processes
- Fate and transport of constituents (e.g., sediment, salt, and nutrients) in aquatic ecosystems
- Analysis and modeling of watershed management (e.g., riparian, stream and wetland restoration, and agriculture conservation practices)
- Numerical modeling of water and constituents transport in streams
- Development, calibration and validation, and uncertainty analysis of watershed models
- Applications of spatial statistics, multivariate statistics techniques, geographic information science (GIS), and remote sensing (RS) for watershed analysis and management
- Study of watershed ecosystem interactions
- Impacts of climate change and landscape practices on water quantity and quality
- Flooding and drought

EXPERTISE SUMMARY

- Thorough understanding of principles and applications on hydrology and hydraulics (in particular, open channel hydraulics)
- Abundant experiences on watershed/ecosystem analysis, practices, and management
- Familiarity with both simulation and optimization approaches for watershed analysis
- Ability to develop mathematical models for watershed and ecosystem simulations
- Hands-on experiences on widely-used mathematical models, including, but not limited to:
  - HEC-family models – HEC-HMS/HEC-GeoHMS, HEC-RAS/HEC-GeoRAS, HEC-DSSVue, CE-QUAL-W2, and FFA
  - USDA-family models – SWAT, EPIC, GLEAMS, CREAMS, RZWQM, AGNPS, AnnAGNPS, APEX, REMM, and CONCEPTS
  - USGS-family models – WSPRO, PEAKFQ, and National Regression Equations
  - EPA-family models – HSPF, WASP, QUAL2F, and SPARROW
  - Model automatic calibration and uncertainty analysis tool – PEST
- Skills of programming in various computer languages, such as FORTRAN, Visual Basic, Visual Studio .NET, Visual C++, and Java
- Skills of using and customizing ESRI GIS software packages, such as ArcView, ArcGIS, and ArcIMS
- Ability to apply statistics techniques and software packages, including SAS, S–PLUS, and WinSTAT
- Master of using spreadsheet (e.g., Microsoft Excel) and other Microsoft Office software packages
- Ability to teach courses at various levels, including K–12 kids, publics, certificates, undergraduates, and graduates
- Ability to advise students’ curriculums and theses
- Skills of effectively collaborating with peers and interdisciplinary team members
- Ability to write successful proposals and manage projects

EDUCATION

Ph.D. Iowa State University Agriculture Engineering (soil and water) Minor: Statistics Aug., 2001
M.S. Tsinghua University, Beijing, China Civil Engineering (hydrology and water Resources) Jun., 1993
B.S. Tsinghua University, Beijing, China Civil Engineering (hydrology and water Resources) Jun., 1989
PROFESSIONAL ACTIVITIES

Member of
American Society of Civil Engineers (ASCE)
American Society of Agricultural and Biological Engineers (ASABE)
American Water Resources Association (AWRA)
American Geophysical Union (AGU)

Referee for
• Transactions of the ASABE
• Applied Engineering in Agriculture
• Journal of American Water Resources Association
• Journal of Spatial Hydrology
• Journal of Coastal Research
• Journal of Hydrology
• Journal of Environmental Management

Associate Editor for
• Journal of Spatial Hydrology (watershed analysis and modeling)

PROJECTS INVOLVED AS A PRIMARY INVESTIGATOR

Ongoing


• Apply SWAT model to determine the total maximum daily loads of sediment, nutrient, and phosphors within three Minnesota watersheds located in the Red River of the North Basin, 150,000 USD. Minnesota Pollution Control Agency (MPCA).

Completed


• Sources and transport mechanisms of phosphors within a watershed, 50,000 USD, June 2006 – June 2007. U.S. Department of Agriculture (USDA).


• Integrated Assessment of Environmental and Economic Implications of Precision Farming on Crop Production, **100,000 USD**, June 1998 – May 2001. Funded by U.S. Department of Agriculture (USDA) Agriculture Research Service (ARS).


• Risk Analysis of the Water Supply System Resulting from 1993-Type Drought in Kyushu Island, Japan, **1,000,000 JPY**, June 1996 – December 1996. Funded by Kyushu University at Fukuoka, Japan.


• Development of a Rainfall Runoff Model to Predict Flood from Zhujiang River and Local Storms in the City of Guangzhou, Guangdong Province, China, **150,000 CNY**, January 1991 – December 1993. Funded by the Chinese Science Foundation.

• Fate of Water and Salt in the Yeerqiang River Ecosystem, **800,000 CNY**, June 1990 – December 1997. Funded by the Xinjiang World Bank Loan Office and Xinjiang Bureau of Water Resources.


•conjunctively Modeling of Groundwater and Surface Water for the City of Anyang, Henan Provience, China, **50,000 CNY**, June 1990 – December 1990. Funded by the Yubei Planning and Design Institute.


**Pending Proposals**

• Under consideration
PROFESSIONAL EXPERIENCE

Sep. 2007 – Present: Assistant Professor, Department of Mathematics, Physics & Engineering/Hydrology and Water Resources, Tarleton State University
- Teach courses in the field of hydrology, hydraulics, and water resources
- Conduct researches related to hydrology, watershed analysis and modeling, and GIS applications

- Develop and use hydrologic/hydraulic models for basinwide flood reduction analysis
- Conduct researches on watershed planning and management (e.g., riparian, wetland and stream restoration, and agricultural conservation practices)
- Model the potential impacts of coalbed methane (CBM) produced water on the habitant quality of the Powder River in Wyoming and Montana
- Advise graduate thesis
- Provide local governments consultation on hydraulic analyses related to a dike project
- Teach fluid mechanics and hydraulic engineering courses
- Explore modeling framework to explore watershed ecosystem interactions
- Develop proposals

May 2001 –Aug. 2002: Civil Engineer, Michael Baker Jr., Inc.
- Review hydrology/hydraulics models and analyses for NFIP
- Develop hydrologic/hydraulic models for floodplain and floodway analyses
- Delineate floodplain using GIS based on the results of hydrologic/hydraulic models

Jun. 1998 – May 2001: Graduate Research/Teaching Assistant, Iowa State University
- Study the impacts of agricultural practices on soil and water quality
- Improve the existing water quality models (RZWQM and CERES-MAIZE)
- Couple the models with ArcView GIS
- Conduct researches on applications of spatial statistics
- Characterize landscape of Iowa using Landsat 5 and Landsat 7 images
- Teach GIS labs and watershed modeling courses

Jun. 1996 – Jan. 1997: Visiting Professor, Kyushu University, Fukuoka, Japan
- Conduct risk analysis of water supply resulting from 1993-type drought in Kyushu Island, Japan
- Develop short-term and long-term strategies for drought resistance

- Conduct researches on flood forecasting, flood control, and flood mitigation
- Develop hydrologic/hydraulic models for watershed analysis, planning, and management
- Provide governments consultation on natural disaster mitigation and water optimal allocation
- Teach hydrology/hydraulics modeling courses
- Teach watershed planning/management courses
SELECTED PUBLICATIONS

Peer-reviewed Papers
Wang, X. in review. Analysis of depression storage in a glaciated watershed using topographic datasets with different resolutions. Transactions in GIS.
Wang, X. revised. Using SWAT to simulate streamflow in a northwestern Minnesota watershed with numerous wetlands. Transactions of the ASABE.
Wang, X. 1995. The theory and method to draw precipitation contour in computer. SHUILISHU WENZHIDONGHUA, 3. (Chinese)
Book Chapter

Presentations and Reports

Theses

Brief summary: The research focuses on evaluation of precision agriculture practices on maximizing crop yields and at the same time minimizing contamination of soil and groundwater resulting from nitrogen and pesticide leaching.


Brief summary: The research focuses on development of real-time forecasting models. The models include an overland rainfall-runoff model, a channel routing model, and a reservoir routing model. The rainfall-runoff model covers the entire 150,000-km² Caobai
River watershed, located in the north of Beijing. The routing models cover more than 1000-km dendritical streams and 20 reservoirs that are hydraulically connected in series and/or parallel.


**Brief summary:** The research focuses on development of real-time forecasting models. The models include an overland rainfall-runoff model, a channel routing model, and a reservoir routing model. The rainfall-runoff model covers the entire 10,000-km² Anyang River watershed, located in the Anyang City, Henan Province. The routing models cover more than 200-km dendritical streams and 3 reservoirs that are hydraulically connected in series and/or parallel.

**AWARDS**

- Outstanding reviewer for the Transactions of the ASABE (2006)
- Outstanding reviewer for the Transactions of the ASABE (2004)
- Listed in the Who’s Who in Engineering and Science in 2004
- Appreciation Award for the excellent presentation to the members of Chinese Delegation to the Federal Emergency Management Agency (FEMA), Michael Baker, Jr., Inc., February 2002
- First award for the Flood Control Decision Support System of Chaobai River, Beijing Hydraulic Engineering Bureau, June 1995
- Second award for Excellent Teaching, Tsinghua University, January 1995
- Second award for the Study of Large-sophisticated Water Supply System Planning and Optimal Management, Chinese National Science Foundation, February 1991
Dr. Roger D. Wittie
Tarleton State University
Division: Academic Affairs: College of Agriculture and Human Sciences
Agribus, Agron, Hort, & Rng Mg
(254) 968-9931
Email: WITTIE@TARLETON.EDU

Education
Ph D, New Mexico State University, 1992.
Major: Range Science

MS, University of Wyoming, 1978.
Major: Range Management

BS, Texas A&M University, 1977.
Major: Range Science

Administrative Assignments
Director, College, June 1, 2007 - Present.
Responsibilities: Provide operations and budgetary oversight for the Tarleton Compost
Analysis Laboratory, an educational business enterprise providing analytical services for
compost producers and governmental agencies.

Department Chairperson, Department, May 1, 2001 - Present.
Responsibilities: Provide operational, budgetary, and programming oversight for the
Department of Agribusiness, Agronomy, Horticulture, and Range Management in COAHS

Professional Positions

Academic
Graduate Teaching and Research Assistant, New Mexico State University. (August 15, 1984 -
August 15, 1989).

Professional
Ag Extension Agent/Chair, University of Nebraska. (July 15, 1982 - July 31, 1984).
Owner/Manager, Environmental Services. (August 1, 1980 - July 14, 1982).
Reclamation Specialist, Mine Reclamation Consultants, Inc.. (December 15, 1978 - July 31,
1980).

Faculty/Staff Rank
Starting Rank: Instructor (September 1, 1989)
Assistant Professor: March 1, 1992
Associate Professor: September 1, 1997
Full Professor: September 1, 2002
Tenure Decision: September 1, 1996
Licensures and Certifications


TEACHING

Teaching Experience

Tarleton State University
A EC 484, Internship, 1 course.
AGRI 101, Fresh Seminar in Agriculture, 4 courses.
AGRI 560, Agricultural Research Methods, 2 courses.
AGRI 585, Sem: Orientation, 2 courses.
AGRI 588, Thesis, 2 courses.
AGRI 590, SPC TPCS: RANGE PLANTS, 4 courses.
AGRN 484, Internship, 1 course.
AGRN 486, Agrn Probs, 4 courses.
HORT 484, Internship, 1 course.
HORT 486, Horticulture Problems, 1 course.
RNRM 302, Range Plants, 3 courses.
RNRM 320, Watershed Mgmt, 1 course.
RNRM 399, Cooperative Edu, 1 course.
RNRM 484, Internship, 2 courses.
RNRM 486, Prbms in Rgmt, 2 courses.
RNRM 586, Range Mgmt Prob, 3 courses.
WLDM 375, Conservation Natural Resources, 1 course.

Directed Student Learning

Master's Thesis Committee Chair, Agribus, Agron, Hort, & Rng Mg. (September 1, 2008 - Present).
Advised: Alan Deubler

Master's Thesis Committee Member, Agribus, Agron, Hort, & Rng Mg. (September 1, 2008 - Present).
Advised: Xingu Yang

Master's Thesis Committee Member, "Application of Statistical Sampling Methods to Soil Phosphorus Data from North Central Texas Dairies," Mathematics. (September 1, 2007 - Present).
Advised: Bonnie Terry

Other, Animal Science. (September 1, 2007 - Present).
Advised: Jacklyn Jones

Master's Thesis Committee Member, "Evaluation of Vitazyme as a Fertilizer Supplement for Increasing Crought Tolerance and Resistance to Damage from Traffic," Agribus,Agron,Hort,&Rngmt. (July 1, 2007 - Present).
Advised: Leslie Beck

Master's Thesis Committee Chair, "Sediment and Phosphorus Transport Predictions on Windthorst Soils Receiving Dairy Effluent in Erath County, Texas," Agribus,Agron,Hort,&Rngmt. (June 1, 2007 - Present).
Advised: Marissa Condren
Other, Agribus, Agron, Hort, & Rmgt. (January 15, 2007 - Present).
  Advised: Elizabeth Anderson

  Advised: Frederick Shrank

  Advised: Paul McGehee

Master's Thesis Committee Member, "Determination of Seed Size in Relationship to the Distance from the Main Axis in Arachis L.," Agribus, Agron, Hort, & Rmgt. (June 1, 2007 - December 15, 2008).
  Advised: John Williams

  Advised: Will Hatler

  Advised: Angela Lee

Master's Thesis Committee Member, "Vegetative Covers for Sediment Control and Phosphorus Sequestration from Dairy Waste Application Fields."
  (June 1, 2007 - May 31, 2008).
  Advised: Giril Subhasis

Master's Thesis Committee Member, "Evaluation of Vitazyme as a Fertilizer Supplement in Establishing and Maintaining Bermudagrass," Agribus, Agron, Hort, & Rng Mg. (September 1, 2006 - May 31, 2008).
  Advised: Jimmie Rose

Master's Thesis Committee Member, "Genetic Diversity of Baird's Pocket Gopher using AFLP," Biological Sciences. (September 1, 2006 - May 31, 2008).
  Advised: Samuel Kieschnick

Master's Thesis Committee Chair, "Influence of Parent Material on the Genesis of the Miles Soil Series," Agribus, Agron, Hort, & Rng Mg. (September 1, 2006 - February 1, 2008).
  Advised: Joe Parsley

  Advised: Dean Dittus

**RESEARCH**

**Published Intellectual Contributions**

**Refereed Journal Articles**


Conference Proceedings


Journal Articles


Other


Presentations Given

Wittie, R. D. (Presenter & Author), "Nutrient Mobility and Transport in Dairy Landscapes," Huazhong Agricultural University, Wuhan, Hubei Province, PRC. (June 14, 2009).

Wittie, R. D. (Presenter & Author), "Crop Production Trends in Central Texas, USA," Zhuhai Agricultural Research Center, Zhuhai, Guangdong Province, PRC. (June 8, 2009).

Subhasis, G. (Presenter & Author), Mukhtar, S. (Author Only), Wittie, R. D. (Author Only), ASABE Annual Conference, "Vegetative Covers to Control Sediment and Phosphorus in Runoff from


Contracts, Grants and Sponsored Research

Contract

Wittie, Roger D. (Co-Principal), McGahan, Donald G (Co-Principal), "Interagency Cooperation Agreement," Sponsored by USDA-Natural Resource Conservation Service, Federal, $15,000.00. (September 1, 2008 - August 31, 2009).


Wittie, Roger D. (Principal), "Interagency Cooperation Agreement," Sponsored by Texas Department of Transportation (TxDOT), State, $100,383.00. (September 1, 2007 - August 31, 2008).

Grant

Wittie, Roger D., Muir, James P (Principal), Lambert, Barry D. (Supporting), Mukhtar, Saqib (Co-Principal), McGahan, Donald G (Supporting), Harris, Bill (Co-Principal), "Developing and Demonstrating Effective Vegetative Filter Strips for Concentrated Feeding Operations in North Central Texas," Sponsored by TSSWCB-EPA 319h, State, $400,421.00.

Wittie, Roger D. (Co-Principal), Muir, James P (Principal), "Improving Seed Quality and Production of Native Species for Range Restoration," Sponsored by USDA-CSREES, Federal, $141,468.00.

Wittie, Roger D. (Supporting), Muir, James P (Principal), "Sustainable integration of high diversity cellulosic biofuel production with existing family-owned livestock systems in marginal climates," Sponsored by CSREES-SARE, Federal, $215,800.00.

Wittie, Roger D. (Co-Principal), Muir, James P (Principal), "Sustainable Production of Mixed Grass Systems as Biofuel Feedstock in the Southern Great Plains South Central Region," Sponsored by Sun Grant Center, Federal, $356,000.00.

Thompson, Carol Ann (Supporting), Cawthon, Donald Loyd (Principal), Drueckhammer, David C. (Supporting), Wittie, Roger D. (Supporting), Jafri, Hussein (Supporting), Ball, Betsy (Supporting), "Short Course Development: Perspectives on Agricultural Water Management in China," Sponsored by USDA-CREES, Federal, $99,949.00. (2008).

Wittie, Roger D. (Supporting), Muir, James P (Principal), Weindorf, David C (Supporting), Mukhtar, Saqib (Supporting), "Phytoremediation of Excessively High Phosphorus Soils and Subsequent Reduced Phosphorus Runoff into the North Bosque River," Sponsored by TSSWCB-EPA 319h, State, $238,959.00. (September 2004 - August 2008).
Sponsored Research

Wittie, Roger D. (Supporting), Borlaug Institute (Principal), "Building Competitive Advantage Among Agribusiness Women in Africa, A Proposal for the 10,000 Women Project," Sponsored by Goldman-Sachs, Texas A&M University, Private.

SERVICE

Department Service

Faculty Advisor, Tarleton Wildlife Society. (October 1, 1999 - Present).

Faculty Advisor, Intercollegiate Plant Identification Team. (September 1, 1989 - Present).

Faculty Advisor, Agricultural Resources Organization (ARO). (September 1, 2001 - August 31, 2008).

College Service

Attendee, Meeting, Facilities Planning Workgroup. (October 1, 2008 - Present).

College Coordinator, Ag Computer Lab Use. (September 1, 2008 - Present).

Committee Chair, COAHS Instructional Technologies. (January 15, 2005 - December 15, 2008).

Committee Member, COAHS Dean's Development Council. (September 1, 2007 - November 3, 2008).

Committee Member, FFA CDE Range Events. (March 2008 - April 2008).

University Service

Committee Member, Web Design Standards Workgroup. (November 1, 2008 - Present).

Committee Member, Interdisciplinary Degrees Committee. (September 1, 2008 - Present).

Committee Member, Academic Council. (January 15, 2001 - Present).

Committee Member, Graduate Council. (September 15, 1999 - Present).

Committee Member, Financial Aid and Scholarship Advisory Committee. (September 15, 1998 - Present).

Professional Service

Conference-Related, Texas Section Society for Range Management, Texas. (January 15, 1989 - Present).

Conference-Related, Annual Meeting Planning Committee - SWAN, Stephenville, TX. (October 1, 2006 - April 30, 2007).
Name: Hong Wu

Area of Expertise/Interest:

Water quality and quantity modeling; Watershed protection management; Climate impacts on environment and natural resources; Risk assessment analyses; GIS applications in natural hazards mitigation and water resources; Statistics analysis

Education

Ph.D. Dec. 2002 Natural Resource Sciences, University of Nebraska-Lincoln
M.S. Jun. 1992 Applied Climatology, Chinese Academy of Meteorological Sciences, Beijing, China
B.S. Jul. 1989 Climatology, Nanjing Institute of Meteorology, Nanjing, China

Professional Experience

Senior Research Associate (Jun. 2005 – present) Texas Institute for Applied Environmental Research, Tarleton State University, Stephenville, TX

- Developing Total Maximum Daily Loads (TMDL) for bacteria on impaired streams through SWAT model
- Collecting and analyzing ecosystem fluxes through Eddy Covariance technique and determining the effects of brush (mesquite) control on total water budget
- Collecting and analyzing streamflow data and determining the effects of brush (juniper) control on runoff through APEX model

Research Associate (Jan. 2003-Jun. 2005) National Drought Mitigation Center and High Plains Regional Climate Center, University of Nebraska-Lincoln, Lincoln, NE

- Modeled climate change impacts on agriculture and environment
- Established web-based water resource monitoring system
- Conducted research on use of climatic indices in climate impact assessment
- Developed quality assurance (QA) procedures for meteorological data

Current Active Research Projects

Carters Creek Bacteria TMDL;
Effect of Brush (mesquite) Control on Evapotranspiration;
Effect of Brush (Juniper) Control on Surface Runoff

Refereed Journal Articles


Other Publications


Papers Presented at Professional Meetings


Posters at Professional Meetings

2004  School of Natural Resources Research Colloquium, Lincoln, NE
2003  School of Natural Resources Research Colloquium, Lincoln, NE
Dr. Mark Yu
Tarleton State University
Agribus, Agron, Hort, & Rng Mg
(254) 968-9232
Email: YU@TARLETON.EDU

Education

Ph D, Texas Tech University, 2000.
Major: Agriculture & Applied Economics

MS, Huazhang Agriculture University, Hubei, China, 1996.
Major: Agriculture Economics

BS, Huazhang Agriculture University, Hubei, China, 1993.
Major: Agriculture Economics

Faculty/Staff Rank

Starting Rank: Assistant Professor (March 1, 2001)
Assistant Professor: March 1, 2001
Associate Professor: September 1, 2008
Tenure Decision: September 1, 2008

Professional Memberships


Development Activities Attended


TEACHING

Teaching Experience

Tarleton State University
A EC 105, Intro to Ag Eco, 6 courses.
A EC 212, Microcomputer Appl in Agric, 1 course.
A EC 314, Agri Mktg System, 6 courses.
A EC 317, Agricultural Statistics, 3 courses.
A EC 333, Agriculture Prices, 4 courses.
A EC 399, Coop Education, 1 course.
A EC 406, Commodity Futures Markets, 2 courses.
A EC 421, Eco Development Rural Areas, 1 course.
A EC 484, Internship, 4 courses.
A EC 486, Problems, 2 courses.
A EC 514, Advanced Agri Marketing, 4 courses.
A EC 586, AgEco Prob:Futures & Prob (406), 1 course.
AGRI 588, Thesis, 3 courses.
ECO 421, Economic Development Of Rur, 1 course.

Directed Student Learning


Internship Advisor, Other (Within Tarleton State University). (August 27, 2008 - December 1, 2008). Advised: Sharon Robertson

Internship Advisor, Agribus, Agron, Hort, & Rng Mg. (June 1, 2008 - August 10, 2008). Advised: Austin Simpson

Internship Advisor, Agribus,Agron,Hort,&Rng Mgmt. (June 1, 2007 - August 10, 2007). Advised: Andrew Grimm

Internship Advisor, Agribus, Agron, Hort, & Rng Mg. (June 1, 2007 - August 10, 2007). Advised: James Hulsey

RESEARCH

Published Intellectual Contributions

Conference Proceedings

http://www.usawaterquality.org/conferences/2008/abstracts/Muir08.pdf


**Journal Articles**


**Presentations Given**


Young, M. (Presenter & Author), Yu, M. M. (Author Only), Ewell, F. D. (Author Only), Tarleton State University Annual Student Research Symposium, "The Benefit-Cost of Using Bio-diesel at Tarleton State University," Tarleton State University, Stephenville, TX. (April 1, 2006).


Contracts, Grants and Sponsored Research

Grant

Yu, Man Mark (Co-Principal), "Strategies for Management and Subsequent Reduced Surface Water Phosphorus Runoff from Dairies in West Texas," Sponsored by Sustainable Agriculture Research and Education (SARE), a Program of USDA's Cooperative State Research, Education, and Extension Service (CSREES), Federal, $250,000.00. (September 2007 - August 2010).

Yu, Man Mark (Co-Principal), "Strategies for Management and Subsequent Reduced Surface Water Phosphorus Runoff from Dairies in the North Bosque and Leon Watersheds," Sponsored by Cooperative State Research, Education, and Extensive Service, United State Department of Agriculture (USDA), Federal, $580,000.00. (January 2006 - August 2008).

Sponsored Research


Yu, Man Mark (Principal), "Economic Analysis of Manure Digestion with Black Soldier Fly in the Cross-Timbers Area," Sponsored by Tarleton State University Organized Research Fund, Tarleton State University, $13,608.00. (September 2005 - August 2006).

Yu, Man Mark (Principal), "Economic Impacts of Precision Farming on Corn Production," Sponsored by Tarleton State University Organized Research Fund, Tarleton State University, $13,566.00. (September 2004 - August 2005).

Awards and Honors

Faculty Excellence in Scholarship Award, Tarleton State Univ. (May 13, 2006).

SERVICE

College Service

Committee Member, College Curriculum Committee. (September 2005 - August 2007).

University Service

Committee Member, Academic Advising Committee. (September 2003 - August 2008).

Committee Member, Undergraduate Student Research Taskforce. (January 2007 - December 2007).

Committee Member, University Curriculum Committee. (September 2005 - August 2007).