MEMORANDUM

Colorado State University

TO: CPER Scientists

FROM: Bill Lauenroth, Indy Burke, Debra Coffin, Jim Welsh and Gerald Schuman

DATE: November 14, 1994

Shortgrass Steppe
Long Term Ecological Research
College of Natural Resources
Fort Collins, Colorado 80523 U.S.A.
(303) 491-4996
FAX: (303) 491-2156

SUBJECT: 2nd Annual CPER Symposium

RSVP 11/18

The 2nd Annual CPER Symposium is approaching! Last years meeting was a great success and we plan to continue the symposium each year. The meeting will be January 13 at the Marriott, 350 E. Horsetooth Rd.; the agenda will be mailed in the near future. We are hopeful that most of the scientists, students and staff who work at the CPER will be able to attend.

The purpose of the Symposium is to provide a forum for exchanging information about research being conducted at the CPER and generating discussions about new and important research that we might conduct. We foresee this meeting as fostering a large number of interactions and providing the impetus for some interesting synthesis activities.

Everyone attending is invited to present a poster showing some aspect of their work at the CPER. If you have presented a poster at meetings recently or plan to present one in the near future, this is a good opportunity to give it more exposure! If you do not have recent results but are working on a project, we would be very interested in having a poster presented that tells about your objectives and what you are doing. We will provide poster board and pins, although, bringing your own velcro mounts (hook-side) would be most useful. The boards are green velcro, four feet high and eight feet wide.

We are requesting that you prepare an extended summary, see the attached example: maximum length is one page; single spaced; one key figure or table of results; and photo-ready copy. If you have questions, contact either Debra Coffin, (303) 491-7662 or Gerald Schuman, (307) 637-6124.

At the Symposium, you will receive a copy of the proceedings containing all the summaries. Lunch and snacks will be provided and a former U.S. President will be the luncheon speaker. Staff persons who are not conducting research but are working with a CPER researcher are also welcome to attend.

Please RSVP by December 17, to Linda Palmer if you will be attending. Also, send your extended summary to her by this date if you will be presenting a poster. Please let Linda know if you have special dietary needs and how many support staff will be attending.

Linda Palmer
Rangeland Ecosystem Science
Natural Resources Bldg., Rm. 239
Colorado State University
Fort Collins, Colorado 80523

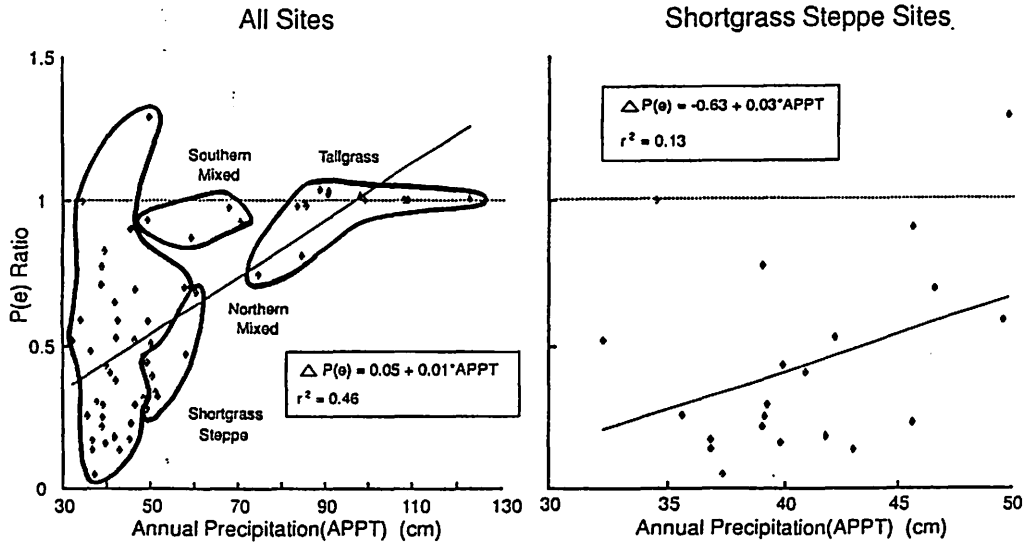
e-mail: lindap@CNR.ColoSate.EDU

SUMMARY FORM: 1995 CPER SYMPOSIUM
EXAMPLE

1. Presenting Author Debra P. Coffin
2. Affiliation Colorado State University
3. Address Department of Rangeland Ecosystem Science and Natural Resource Ecology Laboratory, Colorado State University, Fort Collins, CO 80523
4. Phone number (303) 491-7662
5. email deb@aristida.cnr.colostate.edu

Coffin, Debra P., and William K. Lauenroth. Regional Analysis of the recruitment of the perennial grass, *Bouteloua gracilis*: effects of climate change.

We evaluated the recruitment potential by seedlings of the perennial C_4 grass, *Bouteloua gracilis* (blue grama) for the CPER and the central grassland region of the U.S. under current climatic conditions and for changes in climate. *B. gracilis* is common in all four grassland types of the central grassland region (shortgrass steppe, northern and southern mixedgrass prairies, tallgrass prairie). In addition, *B. gracilis* dominates shortgrass steppe plant communities and is important in the northern mixedgrass prairie. Seedling establishment by *B. gracilis* is important both for recovery after disturbances since tillering rates are slow, and in determining the geographic distribution of abundance of this species. We used a multi-layer daily time step soil water model (SOILWAT) to evaluate the probability of recruitment of *B. gracilis* seedlings for a range of soil textures and a range of current and expected changes in climatic conditions representative of the region. Simulations were conducted using daily precipitation and temperature data for 66 weather stations. Under current climate, probability of recruitment increased with increasing temperature and precipitation, and was positively related to silt content of the soil. Probabilities were lowest in the coolest and driest areas, the northern mixedgrass prairie and the shortgrass steppe, where *B. gracilis* is the most important. Under a climate change scenario (see figure), shortgrass steppe and northern mixedgrass prairie sites had the largest proportional decreases in probability of recruitment, as indicated by the ratio of probability under current climate divided by the probability under climate change [P(e)]. These results indicate that the community types where *B. gracilis* is currently the most important, including the CPER, are expected to be the areas most sensitive to changes in climate.



TAKE MATERIALS TO MIKE

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MEMORANDUM

TO: CPER Scientists

FROM: Bill Lauenroth, Indy Burke, Debra Coffin, Jim Welsh and Gerald Schuman

DATE: December 16, 1994

SUBJECT: 2nd Annual CPER Symposium, January 13, 1995

The 2nd Annual CPER Symposium is less than a month away! We have received many responses, if you have not sent an RSVP, please do so immediately. The deadline for returning the extended summaries and the final number of reservations has been extended to **Thursday, December 22.** The agenda is enclosed, and you will receive a copy of the proceedings containing all summaries at the Symposium.

For those who have not sent an extended summary and are preparing a poster, the extended summary should be received, in this office, by the deadline date. Attached is an example of an extended summary. The maximum length should be one page; single spaced; one key figure or table of results; and photo-ready copy. If you have questions, contact either Debra Coffin, (303) 491-7662 or Gerald Schuman, (307) 637-6124.

Poster board and pins will provided, although bringing your own velcro mounts (hook-side) would be most useful. The display boards are green velcro, four feet high and eight feet wide.

Lunch and snacks will be provided and a former U.S. President will be the luncheon speaker. Staff persons who are not conducting research but are working with a CPER researcher are also welcome to attend. The meeting will be **Friday, January 13**, at the Marriott, 350 E. Horsetooth Road.

Please send your summary and the names and addresses of additional support staff that will be attending by December 22, to:

Linda Palmer
Rangeland Ecosystem Science
Natural Resources Bldg., Rm. 206
Colorado State University
Fort Collins, Colorado 80523

e-mail: lindap@CNR.ColoSate.EDU

CPER Symposium

Agenda

January 13, 1995

8:00		Arrival and Poster Mounting (Coffee and Sweet Rolls)
8:30		Welcome and Introduction
8:45		Keynote Address: "Perception is Reality? Science and Attitudes in Range Policy"
		Bill Riebsame, the University of Colorado
9:30		Presentation
		"Soil-Atmosphere Exchange of CH_4 and N_2O at the CPER"
		Presenter: A. R. Mosier
		Contributors: D. W. Valentine, W. J. Parton, D. S. Schimel D. S. Ojima, M. C. Skoles and R. E. Martin
10:15	Break and Posters	
12:00	Lunch	"A visit from Teddy Roosevelt"
1:15		Presentations
		"Stable carbon and oxygen isotope studies at the CPER"
		Presenter: Gene Kelly
1:45		"Grazing studies at the CPER"
		Presenters: Dick Hart and Daniel Milchunas
2:30		Break and posters
4:00		Adjourn