

• May 2007

• Volume 2, Issue 4

Oh BEHAVE!

Behavioral Education for
Human, Animal, Vegetation
& Ecosystem Management

BEHAVE Outreach Program • 435-797-3576



*The Newsletter for the
BEHAVE Research and
Outreach Program*

Dr. Darrell Emmick!!!

Darrell successfully defended his PhD. dissertation in mid-May
Congratulations!!!!

BEHAVE Principle of the Month:

Structure determines the experience and experience determines structure. How we and our animals experience the world depends on our bodies' structure and physiology. A mouthful of grass is not the same experience for us as it is for a ruminant. But experiences, especially those early in life, can actually change our brains, physical structures in the body and the way our bodies work. Experience can actually change gene expression. Want to know more? Read the fact sheet: [Structure determines experience, experience determines structure.](#)



Behavior Facts: What We've Learned

The BEHAVE program under the direction of Dr. Fred Provenza has been conducting research on the diet and habitat selection of herbivores for over 25 years. When the project began, we didn't even know how or even if livestock learned about foods. So what have we as researchers learned in that time? Plenty.

Behavior Facts is a new section on the BEHAVE website that summarizes 25 years of research conducted at USU

and other institutions into neat, tidy bits of information. It reviews 125 articles and lists 120 facts about diet and habitat selection and grazing behavior. Check them out at www.behave.net/products/behavior_facts.html.

Behavior Facts is a work in progress so if you see an article that needs to be added to the list please send the reference to me, Beth Burritt, at bethb@cc.usu.edu.

BEHAVE Facilitator's Network: Washington Workshop



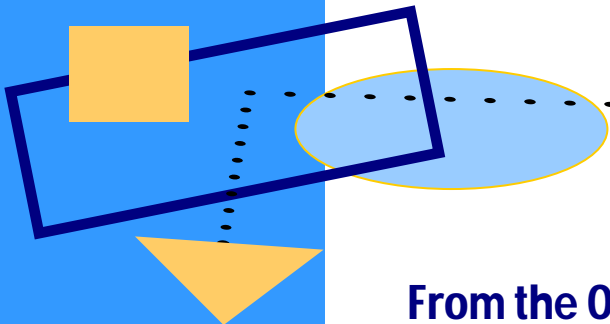
In late March, Linda Hardesty and I had the pleasure of hosting the Washington BEHAVE Facilitator's Network Workshop in Moses Lake, WA. Fifteen enthusiastic participants attended. They came from WSU Extension, Washington Department of Fish and Wildlife, Forest Service and the Natural Resources Conservation Service. Several graduate and undergraduate students from WSU also attended.

The workshop outlined the principles of behavior as well as tips for teaching

adults, how new ideas are adopted and how to host a successful workshop. It also included such fine delicacies as pickled duck eggs and jellied grass. We finished the workshop with a rousing game of BEHAVE Jeopardy. BEHAVE Jeopardy can be found on the web site at: www.behave.net/BFN/BFN_materials.html.

The next BEHAVE Facilitator's Network workshop will be held by Roger Ingram in Auburn, CA, on June 26 & 27. [More info about the California workshop.](#)

Continued
On Page 2



Your Source
for All Things
BEHAVE

The BEHAVE Program
Wildland Resources
5230 Old Main Hill
Utah State University
Logan, UT 84322-5230

Phone:
Beth Burritt
BEHAVE Outreach
Program Director
435-797-3576

E-Mail:
bethb@cc.usu.edu

We're on the Web!
See us at:
www.behave.net

From the Old World: The Herder as a Restaurant Chef

Can we learn something about diet selection from French herders? Sheep and goats herded on coarse rangelands may eat twice as much as predicted from scientific models. Want to know how it works? [Read MENU-model](#). It describes how experienced French herders organize half-day grazing circuits for their animals that constantly revives an animal's appetite.



Foraging Sequences: Not Only What But When

The plants animals select in their diets are important to their health and productivity. The order in which plants are eaten may also play an important role in the intake of plants high in secondary metabolites.

Former USU graduate student, Travis Mote, found that sheep ate more foods that contained terpenes, like those found in sagebrush or juniper, after eating foods high in tannins, plants like oak brush, bitterbrush, and sericea. In addition, Mote found lambs that learned to eat terpenes after eating tannin had a higher preference for terpenes than lambs that did not eat foods high in tannins before terpenes. It's thought that tannins bind to terpenes in the gut.

These findings shed new light on a paper recently published in the Journal of Ecology and Range Management. Researchers found sheep with strong preferences for sagebrush (terpenes) also ate a lot of bitterbrush (tannin). Were these just shrub-loving sheep as researchers speculated or did sheep learn to mix shrubs, one high in tannin and another in terpenes, to their benefit?

Mote's results suggest that managers who can design grazing system to help animals learn how to mix foods in their diets may improve animal productivity as well as aid in maintaining rangeland health and biodiversity by increasing preference for plants high in secondary metabolites.

Coming soon:

- Update: Supplement increases sagebrush intake
- Dairy cows on pasture: More than the luck of the bite
- This summer's graduate research is underway

UtahState
UNIVERSITY
extension

Utah State University is an affirmative
action/equal opportunity institution

