

The Rimrock Report



The University of Arizona,
School of Natural Resources and the Environment



Volume 5, Issue 1

January 2012

Sequías sin fronteras (Droughts without borders).

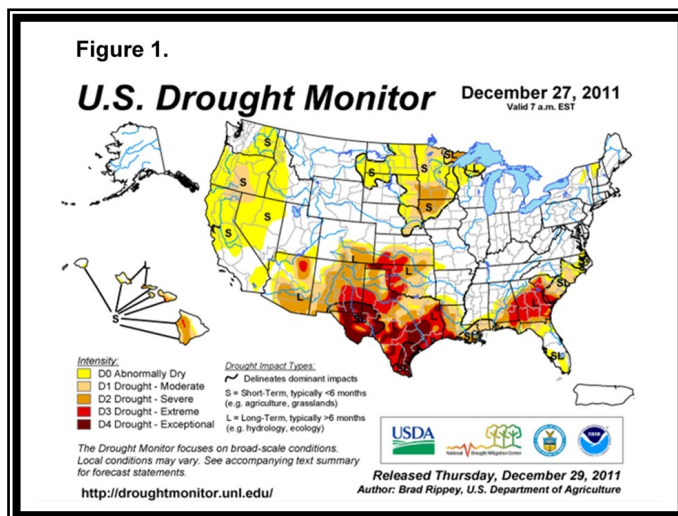
“It crept up out of Mexico, touching first along the brackish Pecos and spreading then in all directions, a cancerous blight burning a scar upon the land.”

The quote above is the first sentence of the introduction to [“The Time It Never Rained”](#) an award winning novel by the late [Elmer Kelton](#). The story follows the life of West Texas rancher Charlie Flagg through the drought of the 1950’s. If you have not read this one, and especially if you are a range person, or anyone who deals with drought on a first-hand basis, I highly recommend that you do read it. On second thought, I highly recommend it even if you do not count yourself in those two categories. The book is admittedly written from a certain political viewpoint, but even if that viewpoint is different than yours I think you will appreciate the honest treatment of the story and the characters by Mr Kelton; a man who lived through “the drought” and writes with a tremendous sense of time and place. Many of you my age and older (remember that I officially qualify as an “antique” now) will identify with the main character. You may see yourself or someone you know in him. Many of you who work for the government will be frustrated by him. Whatever else you may enjoy about or gain from the book, I hope that you will come away with an appreciation for the reality of it; for the harsh consequences of drought and how these impact or are impacted by politics, economics, personal and social relationships, etc... i.e. everyday life.

I use the quote here for two reasons: 1) I am a big Elmer Kelton fan and I think this is arguably his best work, and 2) I want to draw attention to the current drought, not only in the southwestern US but in northern Mexico as well. Why? Read that first phrase in the quote again.

“It crept up out of Mexico, ...”

Even with some recent rains, the drought in the southwestern US is big and bad (Figure 1). For



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“Even with some recent rains, the drought in the southwestern US is big and bad...”

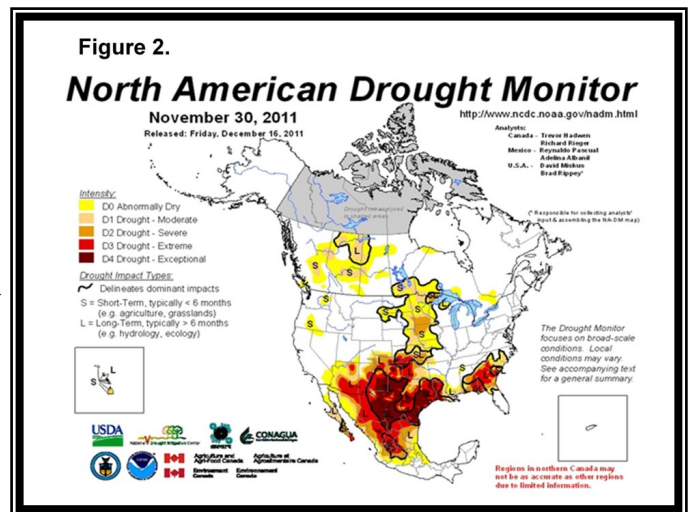
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Sequías sin fronteras (Droughts without borders)...continued

instance, 36% of Arizona is in the “severe” to “exceptional” drought classification. Similarly, New Mexico has 72% and Texas 84% in these classifications. California has no severe to exceptional drought but much of the desert sections in the south are considered abnormally dry at the moment. Production of traditional agricultural commodities such as cotton and wheat have obviously been affected. But that sort of thing is old news that we have all heard before and most people don’t care much about, right? Probably, but the average person on the street might be concerned that Christmas tree and wildflower seed crops have been hit in Texas, as have New Mexico chile’s; or that frogs are being rescued from drying waterholes in Arizona... All these states border Mexico. I wonder what it looks like “over there”? I wonder what might be creeping up from Mexico this time? Look at Figure 2.

We should not be too surprised that much of northern Mexico is also in a severe to exceptional drought. Ok, so what? Well, think about it. Think about the difference between commercial and subsistence agriculture. From a humanitarian standpoint, that means a lot of hungry people. From a business perspective, that means less market options for breeding cattle, fewer stockers if and when the drought breaks over here. What about the potential effects of this drought, considered to be the worst in 70 years in Mexico, from a political/social/economic perspective? How would you like to be a candidate for political office in the southwest or nationally and have some smart-alec reporter throw out this question in a televised debate?



“Representative Smith-Jones, a terrible drought is currently devastating such places as Coahuila, Durango, and Sonora; how would your administration respond to, or better yet, proactively handle the effects that this drought may have on illegal immigration?”

Can you imagine that thought process while trying to formulate an answer? *“I wonder of this is what a deer in the headlights looks like?”*, *“Coahuila, where in the @\$% is that anyway?”*, *“Wait, was that spring break in 1982?, no that was Cancun”*, *“North or south of the border... I have a 50/50 chance...”*, *“I hope Leno doesn’t hear about this”*. Likely followed by an answer something along the lines of... *“Well, Ms. Johnson that is an excellent and thought provoking question and one that requires a great bit of insight and contemplation to adequately address in terms of the context of our current foreign policy and framed within the intellectual debate that exists in this great nation with regard to our national security and world standing; so I can assure the voters that I have a comprehensive plan that is far superior to that of my opponent and I for one would love to hear exactly what he has to say on this subject...”*



Sequías sin fronteras (Droughts without borders)...continued

Now that may be just a bit cynical on my part but, how would you answer that question? Better than our imaginary candidate I suspect, even though most of us probably don't often enough think about droughts, or wildfires, or hurricanes in that way. Even though we know that natural disasters don't stay on one side of a border; neither do their effects. I started thinking about this last fall as I drove across Arizona, New Mexico, Texas, and Oklahoma. The drought was evident as I crossed the various regions and it did not start or stop at the state lines. I talked to truckers at gas stations in small towns hauling off a ranchers herd, maybe representing a lifetime of work. As I drove past blackened ground, I thought about the wildfires of last summer that burned across Arizona into New Mexico... As I saw stock tanks dwindling into muddy depressions I thought about working in East Africa on drought and famine early warning systems and how drought in one country can result in a refugee crisis in a neighboring country. And I thought about Mexico. I thought about how we are not prepared to handle the effects of a severe drought to our south while we are in the middle of one ourselves. I thought about people leaving farms and ranches to find work or relief in the city, and then finding none, heading north. I thought about who will first bear the brunt of this immigration on our side of the border. Yes, large cities like Phoenix or Tucson are attractive destinations for these people, but rural communities, rangelands, ranches, or wildlife management areas often lie between them and their destination. This is where a lot of money will be spent to find them and haul them back. Where they will leave their mark on the land in trails and trash. Where they will be taken advantage of by cartels and coyotes. Where ways of life, and species will be endangered. Where there will be conflict and controversy. As a scientist, I also thought that maybe there has been some research done that will help us figure this out.

Turns out that there is a relatively small but growing body of research analyzing the direct effects of weather or climate on immigration. There have been several papers published looking at the links between environmental changes and migration. Most of this type work, again not surprisingly, has been intertwined with political, military, religious, social, or economic effects on how and why people migrate. And for good reason, this is a complex issue. There have been studies on specific acute natural disasters such as a hurricane or earthquake, but many times these people affected have the intent of moving back as soon as the disaster is over. Aid organizations can usually deal with such events to some level of success. There is more of an identifiable beginning and end. But what about a drought? Droughts are not as spectacular in their immediate impacts and don't grab headlines till they are blamed for something like a Wallow Fire. No, like Elmer so eloquently put it, droughts tend to creep up on you. I did find a recent article in the Proceedings of the National Academy of Sciences by [Feng et al.](#) that analyzed the relationship between crop production in Mexico (as affected by weather) during 1995 to 2005, and emigration from Mexico to the US. In my opinion, this article also has a certain political slant and I don't necessarily buy all their numbers or the assumptions made to arrive at them. But, I applaud their recognition of the problem, their efforts to address it with data, and to attempt to model the potential effects of drought on migration. For instance, these authors estimate that for every 10% reduction in crop yields that an **additional** 2% of the adult population in Mexico will emigrate. If that estimation is correct, this could mean several million people over time. At what point would this migration go from "creeping up" status to a full blown refugee crisis? I don't have an answer for



Sequías sin fronteras (Droughts without borders)...continued

that, maybe I should run for office. But if we throw an acute situation like a wildfire, earthquake, or disease outbreak into the mix on top of a chronic drought, it might get here faster than we think.

In case some of you are rolling your eyes by now, saying “yeah whatever, that stuff happens in other places”, does the name “Dust Bowl” mean anything to you? As I recall, drought had something to do with that period in our history (Figure 3). A Harvard economics professor reports ([Hornbeck 2011](#)) that the population of the Great Plains states declined 3 to 8% in the 1930’s. When analyzed on a county by county basis adjusted for

high, medium, or low levels of erosion; high erosion counties experienced 12%, and medium erosion counties 9% greater population loss by 1940 as compared to low erosion counties. The same sort of thing happened in the 1950’s. My grandfather Tolleson moved his family to California to find farm work when things dried up in Texas. I suppose this issue has a personal aspect for me. Let me close with another personal story. I lived in South Texas from 1988 to 1992 and worked on a research ranch about 50 miles from the Rio Grande. We were in a drought. I saw or saw evidence of, illegal immigrants most every day. Even back then, some of them were carrying drugs and guns. The people I came across were mostly just looking for food, work, or directions to San Antonio, carrying dirty water in a plastic Pepsi bottle. I don’t know why this particular event made such an impression on me but one morning I pulled up to a pasture gate on the ranch and when I got out to open it, there was a set of footprints in the dust crossing the 2-track road. This was not unusual, but something struck me about these tracks. When I looked closer they were made by one person, but were from 2 different sized shoes and tread patterns. I don’t know how far they had walked at that point but that was somebody who really wanted to get here. So, I guess the message in all this is that we probably better keep an eye on the drought on both sides of the border and get ready. Ready for what that drought may mean not only for our calf-crop, percent litter cover, or riparian health indicators; but maybe just what that drought may mean for “everyday life” as well.

Figure 3. Photo titled “Drought refugees camp along roadside, Imperial CA.”



From Cal State Bakersfield collection: Dust Bowl Migration Digital Archives

[TOP “10” PICTURES FOR 2011](#)



Plant of the “week” by Guest Writer Joelle Walker

Side Oats Grama

Side Oats Grama, also known as *Bouteloua curtipendula* (BOCU) is part of the Poaceae family and also within the Cynodonteae tribe. BOCU is one of the “go to” rangeland grasses that produces good forage value for all classes of livestock and wildlife. The native species is a perennial grass with a warm season growth pattern. Although most of the *Bouteloua* species provide good to excellent forage, Side Oats was chosen for its large range within North America and a long season of palatability into the summer and fall, with moderate palability in the winter. Side Oats is drought tolerant with certain species surviving in minimum temperatures of -43 F and found in habitats of dry plains, prairies, and rocky hills. It is most abundant in fine-textured soils and better adapted to calcareous and alkaline soils. BOCU begins growth in early spring and generally flowers from July to September producing reproductive seeds, tillers, and rhizomes. Side Oats is very easily identifiable sharing characteristics as described in its name, with individual branches turned to one side of the inflorescence. It reaches heights of about 3 feet with 20-80 spicate primary unilateral branches. The branches consist of 3-7 spikelets in a crowded arrangement. In addition to BOCU being of high forage value, it is also used in erosion control within extremely dry areas. Overall, Side Oats Grama is considered to be a very important rangeland species with qualities that place the plant in high demand.



Photographs and Article by Joelle Walker, a student at Arizona State University. Information provided by North American Wildland Plants: James Stubbendieck. Photos taken on the Tonto Basin National Forest near Lake Roosevelt





Winter Meeting Announcement

2012 Arizona Section Society for Range Management Winter Meeting

**Rangeland CPR: Common sense, Practical applications,
and management Relevant research.**

Location: Sheraton 4 Points Hotel, Tucson Arizona

Dates: Wednesday January 18 to Friday January 20

SRM Members can login and register online.

1. Go to <http://www.rangelands.org/index.shtml>
2. **If you are not a member**, you can sign up here <http://www.rangelands.org/membership.shtml>
3. Login as a member, bottom of “Quick Links”, left of screen
4. Click “Sections, left side of screen
5. Click “Arizona Section Meeting”, below “Sections”
6. View the hottest new video on the market today...
7. Scroll down to see links for program schedule and if you prefer, a mail in registration form
8. Choose options for registration, click “Add to Cart”
9. Once all options are to your satisfaction, click “Checkout”
10. If your address is correct, click “Continue”
11. Put in your CC information and click “Approve Payment”

Don't forget that you can also go online to book your hotel room at the Sheraton 4 Points by visiting:

<https://www.starwoodmeeting.com/StarGroupsWeb/booking/reservation?id=1112166379&key=C5131>

You can also register by check/mail. Go to:

<http://cals.arizona.edu/aes/vbarv/AzSRMWinter2012Meeting.html>

for registration forms, agenda, etc...



Open Position Announcement

Research Technician

The University of Arizona V Bar V Ranch

Salary Range \$22,602 to \$28,000

Applicant review starts January 17. Job available April 1, 2012

Apply only at <http://www.hr.arizona.edu> and select "Apply Here" Choose "Search Postings".

Research Technician - 49226

The successful candidate will work closely with the Rangeland Management Specialist at the V Bar V Ranch, a 75,000 acre working/research ranch in the Mogollon Rim country of the Coconino National Forest. The ranch extends from near Camp Verde at ~3000 ft elevation to near Happy Jack at ~7000 ft and encompasses high desert chaparral, piñon-juniper woodland, and pine forest ecosystems. The ranch is a US Forest Service allotment and runs approximately 530 head of beef cattle and 20 horses. The allotment is located between two wilderness areas and has abundant wildlife including elk, deer, eagles and javelina. Primary program areas will include grazing animal ecology and range livestock production, rangeland monitoring on public lands, and drought management. This person will be expected to work both within a team setting and independently as needed. The position will consist of both field and office/laboratory responsibilities. The ability to work in remote locations in potentially extreme weather conditions is a necessity. Experience with livestock, including horses is desired, as is the ability to operate an ATV in rugged terrain. Plant identification skills are necessary. GIS skills are desired. This person will be responsible for maintaining research records and should be competent in basic word processing and spreadsheet software. This person must be willing to learn the operation of near infrared spectroscopy equipment, both in the lab and in the field. B.S. degree in agriculture or rangeland/natural resources is required. The Camp Verde/Cottonwood/Sedona area is approximately 1.5 hrs north of Phoenix, 1 hr south of Flagstaff and 1 hr east of Prescott. The area has a small town atmosphere with good shopping, educational, medical, cultural and recreational opportunities.

The University of Arizona is an equal opportunity, affirmative action institution. The University prohibits discriminate on the basis of race, color, religion, sex, national origin, age, disability, veteran status, sexual orientation or gender identity and is committed to maintaining a diverse and inclusive work environment.

Apply only at the website listed above, but for more information, interested individuals should contact:

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The view from the Rim

Not everyone left the Great Plains during the 1930's. Many stayed and like those who migrated, their stories can be hard to hear. Though not dramatic or heart-wrenching, I think there is much to hear in this excerpt from the preface of "The Dust Bowl: an agricultural and social history." By R Douglas Hurt

As a native of western Kansas, I grew up hearing my parents talk about the devastating black blizzards of the 1930's. The taped windows, the darkness at noon, and the all-permeating dust seemed nearly incomprehensible to me as a small boy. However, the dust storms of the 1950's gave me some indication of what the Dust Bowl had been like during the "dirty thirties". When a dust cloud rolled over my small home town during the "filthy fifties," my mother would invariably say, "I hope it's not going to start again." It was not until much later, after I had developed an interest in agricultural history, that I understood her apprehension.

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Note: Please email me if you would like to be added to the "mailing" list for this newsletter.

Just me talking...



I am thinking I should lighten up a bit now. No drought references in this little blurb. I hope you all had a Merry Christmas and Happy New Year celebration. We did at my house. Both boys were home. We went to Christmas services, ate good food, watched some football, did a little skiing. I again enjoyed helping out with the livestock judging contest at the Arizona National Livestock Show on New Years Eve. I helped Bopper and Keith from the V Bar V gather up and haul the cattle for the judging classes. Then the past two years I have listened to the junior contestants give reasons. I always enjoy seeing young people who are interested in agriculture, taking on something that challenges them a bit. Or a lot in some cases, not all of us are comfortable with public speaking. And to remember what a group of animals looked like and what was different, good and not so good about each of them and how that compares to the one just above or below in a class of four, is no small feat. My hat's off to all of them. Preparations are well underway for the Arizona Section, Society for Range Management Meetings in Tucson, January 18-20. I am very much interested in hearing our new Dean of the College of Agriculture and Life Sciences at UA, Dr. Shane Burgess, speak at our banquet that Thursday evening. Along with the Yavapai County Cooperative Extension staff, I had the opportunity to meet with Dr Burgess right before the holidays. I think you will enjoy hearing him as well. Many of you know that John Kava who worked in the range program here at the V Bar V has moved on to the NRCS in Prescott Valley. In addition to the great work he did here, we are already missing his apple pies, but we wish him all the best in his new position. So, we are looking for another good person to come work with us here at the V Bar V; check out the announcement in this newsletter if you are interested. We are also taking on the expansion of a project with BLM to conduct monitoring and education in Arizona and will be hiring range research specialists in Yuma and Phoenix. If you are interested in those positions, let me know and I will get you the information. If you would like to read other good books by Elmer Kelton, I suggest "The Wolf and the Buffalo" and "The Man Who Rode Midnight". Well, for a die-hard Texas Aggie football fan, this was another tough year. At least the 10 year drought for bowl game wins is over. Sorry, I said I wasn't going to talk about droughts anymore... Don't forget to check out our [Top 10 pictures for 2011](#).

Till next time,

Doug