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The FlybyNite

*The Newsletter for
Those Who Light Trap
Insects
Volume 1 • Issue 1
June 1997*



1997 Is Shaping Up Good For Us, Bad for Bugs!

The group has been involved in sampling Big Bend National Park, The Big Thicket, Oregon Wetlands and plans are being made for the Third, Fifth Annual Ohio Bug Safari.

*Check out the latest on our web site: point your browser to
<http://www.earthdesign.com> and follow the links.*

By R. J. Garono.

This has been a year of catch up and catching on. The big news is that we were funded by Earthwatch, The Nature Conservancy Texas Chapter and The Nature Conservancy Ohio Chapter.

This year we were able to field over twenty people who shared our interest in killing bugs! Why, this year the bug safari even made its debut on the Microsoft Network.

Read on as Anne Arquette tells about her Big Bend Experience, David Bradsby shares his secret recipes with

you and Kooser imparts words of wisdom.

As always, details of our travels are on the world wide web at <http://www.earthdesign.com>. Watch for additional issues of the FlyByNite at irregular intervals, an aperiodical (Chaos). Thanks to Ayesha Gray for putting together the final draft of this newsletter!

Big Bend Wetlands

by Nurse Anne Arquette

The BB Diary was written for a High School audience. Anne says that she knows bigger words, but didn't use them here. Besides, this article was



edited so she is not responsible anyway. For the complete Daily Diary of the Earthwatch trip to the wetlands of Big Bend see: <http://ourworld.CompuServe.com/homepages/drbog/ewatch.htm>

April 1, 1997

We left the Ramada Inn bright and early for the four-hour trip to Big Bend. During the drive we passed the time spotting and discussing many magnificent birds sighted from the car. We arrived at our campsite in the Basin campground around 1:00 pm, and

successfully found space to set up. Basin campground was spectacular! So named because it is located in a bowl-like depression within a ring of ancient lava formations. Our tents were surrounded by soaring cliffs of reddish rocks.

After a brief orientation by the team leaders, two groups set out to set the first traps. The first site set up went very well. We set off for the second site and left the fence posts to support the traps by the side of the road. By the time we had retrieved the fence posts, it was too dark to find the site. But we were not too disappointed because we saw some wild pigs, a deer, a coyote and best of all a long look at the Hale-Bopp comet .



April 3, 1997

Rain was falling when we woke up this morning. During breakfast a group of javelinas visited the campsite! They did not seem scared of the humans that were nearby, but walked slowly around sniffing the bushes and occasionally eating some leaves. After about ten minutes, they wandered across the road and away from the campsites.

After breakfast we went to check our light traps. The traps at Cattail Falls had lots of bugs in each trap, but most of the alcohol had evaporated out of both buckets. This site was one of the hottest, windiest areas we are sampling.

After collecting the bugs from the traps, we sampled the plants nearby. We have to

be very careful while sampling the plants because many of them have long spines or hard pointed leaves.

The most exciting event of the day happened just before dinner. The cooks said that the stew was ready, so I went to my tent to get my mess kit. I unzipped the tent door and crawled halfway inside, when I sensed that I was not alone. In the dim light I could barely see a small dark body with two white stripes – it was a skunk!!! It had been attracted by some snacks that I had forgotten to take out of my backpack. The skunk was very smart and unzipped my tent door just a few inches and squeezed inside to find the food it smelled. It was eating a date when I surprised it (and it surprised me!). Finally it walked away and we all went to eat a very good dinner of stew. Before I went to bed, I zipped up the tent door and left the zippers up high so no small skunks could reach the zipper pulls during the night!

April 4, 1997

Well...it turned out to be a good thing that I left my tent door zipper up high last night! I woke up at 2:00 am to the sound of an animal scratching at the tent door. Sure enough, it was the skunk. It remembered the place it had found good food and came back for a second helping. I did not want to frighten it (I think you know what happens when skunks get frightened). When I shined my flashlight on it didn't pay any attention to me, but kept looking for the zipper handle where it had found it before. Finally I slapped the tent gently near the door. The skunk raised its tail a little, but then walked away into the bushes.

Today we had a lot of work to do in the "bug tent" when we got back from bringing in the light traps. This is a tent that has a roof to keep off the rain, but all four sides are made of netting to keep the bugs (the live bugs!) out. It rained a lot while we were working, and the wind was blowing too. It even hailed for a few minutes. But we put

on more layers of clothes and the cooks made us a nice hot lunch.

April 5, 1997

At last, the day dawned clear and sunny.



We are now halfway through our time here at Big Bend and Ralph gave everyone the day off. This morning Ginny, Barney, Alma and I hiked down the trail to The Window. The trail leads down a canyon beside a stream, ending in a steep drop off between sheer rock walls. We had a spectacular view through the "window" of rocks across a plain to other more distant mountains. On the return hike we found a sunny rock to play lizard on, soaking up the sun after eating our trail snacks. The sun sure felt good after the days of rain!

After lunch, we had another treat – a trip to the Hot Springs beside the Rio Grande. We enjoyed a long hot soak in the springs with a swarm of caddisflies flying around our heads.

April 7, 1997

Yesterday most of the group spent the first half of the day picking bugs. After lunch, I went with Jim, Ginny, and Barney to Hannold Springs to do the upland vegetation transects. It was very hot in the sun, so I picked the job of "surveyor's stake", which meant that all I had to do was sit in one place holding the measuring tape while the others collected data. I had a nice little siesta while performing a necessary

task. Then we went to Glenn Springs to set up three light traps and run vegetation transects. The vegetation was very thick around one of the wetland sites and it was quite a challenge to bushwhack through.

There have been a number of wildlife sightings since I last reported. The roadrunner came walking right by my tent. Our camp skunk has returned nightly. We have named her Blossom. We have seen several coyotes along the road at night, but none in camp. The most interesting sighting

****NEWS FLASH****

*****BEAR SIGHTING*****

Richard and Shay just returned from Glenn Springs (it is lunch time now), and reported that they had seen a black bear. The bear was not close to the car but they got a good look at it with their binoculars. It was having a leisurely lunch of Yucca blossoms.

report was that of a mountain lion. It happened yesterday when the first group

hiked up to Boot Springs to set traps. On the return trip most of the way down the mountain, the fearless expedition members were walking through the forest when Dave's keen eyes spotted a catlike form among the trees. It was an adult female mountain lion!

April 8, 1997

It's hard to believe this is the last full day of the project (for the Earthwatch volunteers at least). Tomorrow afternoon, I will be leaving Big Bend along with Ginny, Alma, Barney, Shay and Jeanne. Where has the time gone? This afternoon the folks here in camp will try to identify a few more insects, but the big job of sorting and packing all the biological samples and camp equipment will probably take up the rest of the day and early tomorrow morning. We will be up early tomorrow morning to break down our tents and pack up our personal belongings. It will be hard to say goodbye to everyone.

Such a short time ago we were just a group of strangers from around the country, but we have evolved into an efficient field research team and most of all, a group of good friends.



Anne Arquette (right) is a charge nurse at San Francisco University Hospital on the cardiac and thoracic surgery floor. She lives in the Mission District with her two cats, Delta and Spot, drinks strange fermented beverages, has rings on her toes and a tattoo. Shay is on the left.



Koos' Korner: An Inspirational Message from James G. Kooser



Plant Data Update

Most of you know by now that the real focus of our research is the structure and composition of the plant communities, not the insects, despite Ralph's protesting to the contrary.

The real story is in the plants!

Seriously, we began collecting data on the structure and composition of plant communities at our trap sites in 1994. We did this because we thought that perhaps components of the structure (how the plant parts are arranged in space) or composition (the species which make up the plant community), or a combination of both, could help us explain the differences between wetlands we detected in our insect samples. We developed the method which we've used on the field trips on which you've helped.

So far we've gathered data for three years in Ohio, two years in East Texas and one year in the Big Bend. The plant communities are quite different at the three regions. Our Ohio sites include bogs and fens (*Sphagnum* dominated wetlands), emergent marshes and forested sites. The most diverse sites we sample are the Ohio fens, with their rich herbaceous and shrub flora. East Texas has the greatest number of forested sites. The Big Thicket and the Roy Larsen Sandylands Preserves are home to large backwater swamps, baygalls (wetlands dominated by sweet bay and gallberry holly), longleaf pine stands, emergent marshes and sandy open areas. Some of the largest trees I've ever seen are the cypresses growing in backwater sloughs along Village Creek. The Big Bend is a land of extremes. Plant communities there ranged from grass, cactus and shrub communities in the low lying deserts to high elevation hardwood/conifer forests in

Continued Page 5...

Sucked into the Muck

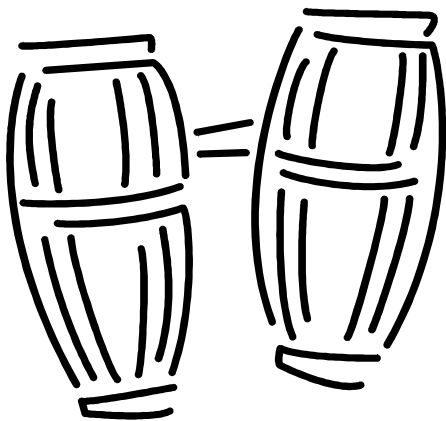
by Ayesha Gray

Bug trapping is a way of life requiring fortitude, patience, persistence, humor and a sense for adventure. Over the course of a bug safari, you might find yourself in the middle of a field during an electrical storm hammering a six-foot-long metal stake into the ground. You might feel a little nauseous after eight intensive hours hovering over a tray of dead insects floating in alcohol. You might get the sensation of ooze between your toes when your Tevas get sucked into the muck while measuring marsh vegetation. And you will certainly learn why *Leersia oryzoides* is also known as Rice Cut Grass. So, why, you might ask, would a normal person choose to subject themselves to such rigorous, dizzying and exhaustive scientific research? It could be the entertainment offered by the Principle Investigators who have been known to put plastic bags on their heads and parade around the campground imitating zooplankton. It could be the after-dinner music performed with wooden spoons, bug buckets and enamel coffee pots. Or maybe it is the simple pleasure

of setting traps in the pouring rain. But there is no better experience for the person looking to participate in ecological research. In a typical 10 day bug safari you will learn to identify 100 plant species, differentiate between 15 orders of insects, and learn as many birds as you can spot without Ralph looking. You will get to see how wetland ecosystems differ from one another by actually measuring the attributes that make them different. You will be able to travel by land, air and water across Ohio experiencing the most pristine sites available. Old Woman Creek on Lake Erie will greet you with a golden orange sky, air that is cool and heavy and a lake with water smooth as glass. You might paddle the canoe through the thick lotus beds beading with morning dew. The meaning of estuarine nirvana might become understood when you hear the riveting cry of the Bald Eagle. If you spot it, tears of amazement might spring to your eyes and an ancient wonder might fill your heart. After an experience such as this, the work, the headaches and the muck disappear as you marvel at the intense beauty of wetland systems and your wisdom to participate in the bug trapping adventure of a lifetime.

Ayesha lives in Harrisburg with her plants. She aspires to be a HAM radio operator and play in a band.

THAT DRUM THING by Robyn Patterson



What about this drumming thing? Last year we were all (new-comers) introduced to the bizarre traditional drum ritual. What's the meaning of this?

Why do we go out in the middle of the night and bang, scrape, tap, clang and beat on pots, pans, dishes, Tupperware and Maxwell House cans? Where does R.J.'s fascination with drumming come from? R.J. was once in a band and, it is true that music is inspirational and fuels creativity. However,

rhythm and drumming have deeper more primitive and primeval roots. Drumming was one of man's first forms of communication, spiritual celebration and, coincidentally, a common ritual before hunting. But where did primitive man get the idea for beating things to communicate and celebrate? From nature of course! Many animals and insects rhythmically drum, beat, scrape, rub and vibrate for a variety of reasons. Man merely imitated what he saw and experienced. So what does all this primitive - man - nature stuff mean? Simply this, when in nature do as the natives do; drum, beat, scrape, rub, pound.... Tune into your natural surroundings, celebrate life, communicate with nature and prepare yourself for the hunt.

The bug hunt that is!

Robyn is finishing her degree at Youngstown State. She is our official bug picker recruiter and prefers Michelob to Guinness.

Koos' Korner Kont.

...the Chisos mountains. Some of the most beautiful plants we've sampled are found in the Chihuahan desert. *Ocotillo*, a tall thin shrub with a bright red terminal inflorescence is among my favorites. The rain that the Earthwatch team experienced in Big Bend hampered our bug collecting, but provided the moisture needed to let the desert bloom. Big Bend wins the prize for having the most difficult to sample plant communities. The desert sites (Cattail Falls upland, Rio Grande upland and Hannold upland) were a breeze to sample. The wetland sites at Cattail falls and Boot Spring were made challenging by the steep slopes, rock outcrops and loose scree. Barney and Alma could have used hard hats as they recorded data at Boot Springs. I caused minor rock slides with every step I took. Barney sought cover behind a tree once I'd gone just a few meters up the slope.

Glenn Springs upstream was a painful site to sample. The spring is surrounded by a very dense growth of *Baccharis* (seep willow). Climbing over, under and through these thickets was quite a challenge. The wetland at Rio Grande was a tough site. Our first attempt to gather data there ended when thunderstorms began and I lost one of Ralph's TEVA sandals. Oh the price we pay for our research! Not to be stymied, we purchased new sandals for Ralph, which I duct-taped to my feet. With David Bradsby assisting by blazing a trail through the dense growth of *Arundo donax* (cane), we gathered those data and prevailed. Check out the website for photos of my feet being taped, and of David and I hip deep in water (thigh deep in muck) at Rio Grande.

So far the data we've collected show a link between the composition of the insect community we sample, and the structure

of the plant community around the traps. We're exploring different ways to examine this relationship.

New Methods in East Texas

As I write this I'm returning home from collecting data with Ralph at the Roy Larsen Preserve in Silsbee, Texas. The preserve is owned and managed by The Nature Conservancy. One of the Conservancy's goals is to restore stands of *Pinus palustris* (longleaf pine) in the preserve. One of the techniques they are using is controlled burning in stands which are now dominated by the non-native, commercially planted slash pine. Our study was designed to examine the effects of burning on the insect community. Since the purpose of the burn is to remove the built up litter on the forest floor, open the shrub and sapling layer, and kill off some of the slash pines in the canopy, we modified our plant community sampling method and developed a method to measure the litter layer. In addition to recording our usual plant data at two meter intervals along our transects, we recorded the presence and height of fine branches, leaves and other plant parts at the odd numbered distances. We also recorded the depth of the litter layer by probing with a wire through the litter to the soil. These measurements were taken at every five centimeters along five meter long transects.

The litter layer at the Sandylands Pond site was quite variable; we recorded differences of up to 10 cm at points spaced only five cm apart. We'll compare these measurement to data gathered after TNC burns the forest, to see if the mean depth and variability change as a result of the burn. Burning questions are still to be answered!

SCUBA Joe to WED

It finally happened ! Scuba Joe, our pilot and long-time friend, finally found the girl of his dreams. Joe and Jen will be wed following the 1997 Bug Safari in Cleveland, Ohio. The ceremony is rumored to be underwater in the company of manatees. The location of the ceremony and honeymoon are being kept a secret to discourage press coverage.



Cooky's Comments

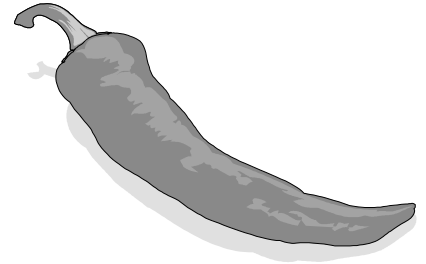
by David Bradsby

Well, the Hills were alive with the sound of music. At least the Chisos Basin were. There we were smack dab (stuck) in the middle (with you). Nestled between the Streets of Laredo and El Paso. Somewhere between a rock and a hard place. A baker's dozen just south of Bakersfield, north of Mexico, and East of Eden. The first night all is not well. So many people, so little time, so little food! But through the miracle of modern science, Shay was able to transform burgers petite into smokey chipotle chili stuff. And it was good! After that near tragedy, all proceeded smooth as a baby's silk bowtie. Ignite the rocket engine in the morning and coffee was ready in two shakes of a skunk's tail. And for another skunk tale, call Anne. Jeanne and Shay proved invaluable and the mystery of Shrodinger's cat.

No out of the can into the man cooking philosophy on this trip. No siree Bob. He even liked the stew! Stew or chili, chili or stew...you can't go wrong with the holy trinity of garlic, onion, and pepper. Is there a lesson here? Live and learn! Make sure the coffee is hot and aplenty in the AM and that the beer is cold in the PM. Hot is relative (just ask Barney). A jalapeno on the side is not worth two in the bush. You can cook in the rain. And just to jog memories, a walk on the mild side with a green chile stew recipe featuring two of the major food colors. Bon appetitif!

Green Chile Stew (for 8)

- 2 lbs pork stew meat, cut in cubes
- 2 Tbs veg oil
- 1 lg onion, chopped
- 1 tsp garlic, chopped
- 2 cups chopped green New Mexico chiles, roasted, peeled, stems and seeds removed
- 2 lg tomatoes, peeled and chopped
- 2 potatoes, peeled and chopped
- 2 tsp ground cumin
- 4 cups water
- salt to taste



Brown the pork in the oil. Add the onion and garlic and saute until the onion is soft. Remove the meat and onion mixture and deglaze the pan with a cup of water. Combine the pan drippings with the rest of the ingredients in a large pot or crockpot, bring to a boil, reduce the heat, and simmer for two hours or until the meat is tender and starts to fall apart.

Being the hedonist that I am, I usually exceed the recommendation for all the ingredients; especially the peppers and cumin. To serve, I like to put tortilla chips in bowls, dish the stew on top of the chips, and then add lime juice, cilantro and avocado. ***Yum yum!***

This 'N That **& A Calendar of EVENTS**

Shon Schooler has just sold a book for real money and plans to support his scientific interests with his art. Shon is a volunteer in the Corvallis Bug lab.

Kooser, Garono, Kiesling and Gray have just presented some bug work at the **Society of Wetlands Scientists Meeting** in Bozeman Montana

Mark your calendar for the Ohio BuG SafARI, Scheduled for 29 August - 8 September 1997.

Please contact R. J. Garono if you're planning on attending this field trip.

Listen for us on the WA8DBW (444.20 mHz) and WD8MDE (442.60 mHz) repeaters in Akron Ohio from 28 Aug- 9 Sept 1997.

Oregon High School Bug Pickers Have Graduated from Mrs. Geinger's class and finished their study at the Miami River, Tillamook County.

Microsoft: Work from the Earthwatch-Sponsored Big Bend Trip will be featured on *Mama Planet*, an online show of the Microsoft Network.

Ayesha Gray got a job offer from Robert Brooks' lab at Penn. State University to work on their Adopt a Wetland program. She is also investigating graduate programs.

Shay Howlin was accepted into the graduate school at Oregon State University. She wants to do a Master's in Statistics !@? Go Figure.

A big Fat BUG **S e l l o** Annie's Kayaks, our favorite corporate sponsor!

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