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UNINVITED GUEST

—Van Vives

On Saturday, June 25, I was working my shift at the Gift Shop and was showing visitors the Bunk House. As we were leaving and while I was still talking about the history, etc., one of the guests pointed behind me and said: “Who’s your friend?” On the window ledge, behind the bench, was a three-foot Black Rat Snake, *Elaphe obsoleta*, lazily resting in the afternoon heat.



Black Rat Snake, Elaphe obsoleta
by Van Vives

It was not moving and the eyes were fixed. I wondered if it was alive, sleeping, or trying to look nonchalant. I also wondered if it was a rubber snake someone put there to scare the swallows away. I decided to leave it there for the rest of the day, but I was careful to alert visitors of its presence as I could envision someone sitting on the bench to rest from the heat and suddenly receiving a nudge from the back. It was the hit of

the day with our young and older visitors. Ann had to come to the gift shop to give us change and I told her about the snake. She, with the help of Carmine and a mighty hoe, got it into a box and moved it to another location.



Black Rat Snake, Elaphe obsoleta
by Van Vives

Black Rat Snakes are not poisonous and are very good climbers. They eat mice, birds, eggs, and lizards. It is also known as the chicken or pilot snake. In summer they are nocturnal. When disturbed, it vibrates its tail. Black Rat Snakes can become quite tame in captivity.

NOVEL WATER QUALITY IMPROVEMENT

—Van Vives

I received an interesting email from my website, www.okprairie.com, from Alice Outwater, requesting the use of one of my bison pictures for her keynote presentation in August to the Environmental Protection Agency (EPA), setting the long-term agenda for the Risk Management

Laboratory. She said that in spite of billions of dollars spent on wastewater treatment, over 40-percent of our waterways are not swimmable or fishable. Her presentation will explain why restoring beaver, buffalo, and prairie dogs to public land would improve water quality.

Interested, I did a search of the Internet as I was not familiar with Alice Outwater. She is an environmental engineer and has published several books, including cartoon books for children, on the importance of water quality. She is best known for her book, *Water: a Natural History*. Many rate that work alongside Rachel Carson's *Silent Spring*.

In 1987, Alice Outwater took a job with the engineering task force to rehabilitate Boston Harbor. Her job was to find a way to dispose of municipal sludge. She was sure that it would be full of chemical pollutants, but when analyzed it proved to have only low concentrations. When she got reports from other cities, she discovered that this was true nationwide. She concluded that cities were indeed cleaning up their sewage.

After much investigation she concluded that cities and industry were no longer the country's biggest polluters, but that the rural heartland was the culprit. The next question was "Why?" One fact that stood out was that bison, prairie dogs, beavers, grasslands, forests, alligators, freshwater mussels, etc., have been and are still being eradicated. The first part of her book explains the intricate relationships between these and water quality. She contends that now nations are fighting

for oil and in the future they will be fighting for water.

I have not read her book, but it would be interesting to see how bison, prairie dogs, alligators, etc., improve water quality. Alice Outwater was clear that she wanted a picture of a bison in full winter coat. Does the bison fur contribute to cleaner water?

Much of this information came from an article written by Tamia Nelson, *Spotlight: Outwater on Water*, for www.paddling.net.

WATER: A NATURAL HISTORY – REVIEWED

—Andrew Donovan-Shead

My intention was to give you a detailed review of Alice Outwater's book "Water: A Natural History." I found several copies available within the Tulsa library system and borrowed one. Engineers are not known for their literary skill, though I am aware of a few and now add Outwater to the top of my list. I decided not to steal Outwater's thunder with a long-winded exposition – her 186 pages have no need.

"Water: A Natural History" is an excellent book, a model of lucidity. Outwater has gathered all the ecological threads known today and woven them into whole cloth in the form of a tapestry that makes visible the complex interconnected dependence of Life. Anyone with any sense and sensibility will find this book disturbing and will recognize the truth of her story. "Water: A Natural History", by Alice Outwater, is worthy of and

deserves your close attention because it bears directly on public policy that is often the cause of decreasing biodiversity and degradation of environmental health.

WHAT'S BLOOMING

—Van Vives

The view along the short walking trail has been spectacular. The Prairie Rose Gentian, *Sabatia campestris*, has been blooming en masse interspersed with Black-eyed Susan, *Rudbeckia hirta*.



Prairie Rose Gentian, Sabatia campestris – by Van Vives

Also along the trail are plants of Blue Hearts, *Buchnera americana*. Mike Palmer says that this is a great year for Blue Hearts. I think this is the first time I have observed the Blue Hearts on the prairie. Sections of the prairie have abundant groupings of purple Wild Bergamot, *Monarda fistulosa*. It seems to be a good year for Bergamot also. The Ironweed, *Vernonia baldwinii*, started blooming the first week of July. One plant that does not seem as abundant as usual is Lemon

Mint, *Monarda citriodora*, which is also known as Horse Mint. The Compass Plant, *Silphium laciniatum*, with its large lower leaves is blooming.



Black-eyed Susan, Rudbeckia hirta – by Van Vives

Black-eyed Susan: Native Americans, especially the Potawatomi, made a tea from the roots to cure colds. Early settlers used the plant as a diuretic and stimulant. A yellow dye can also be made from the plant.



Blue Hearts, Buchnera americana – by Van Vives

Blue Hearts: This plant is partially parasitic and lives off of the roots of other plants.



Wild Bergamot, Monarda fistulosa – by Van Vives

Wild Bergamot: Bergamot has been used for medicinal purposes in the past. The dried leaves make a very good tea and it is found in tea blends such as Earl Grey and Lady Grey tea.¹



Ironweed, Vernonia baldwinii – by Van Vives

Ironweed: It gets its name for its tough fibrous nature. It is very bitter and consequently of little

¹ Bergamot has also been used as an ingredient of sun-tan lotion – Editor.

use as feed for livestock. Beekeepers, however, consider it of value because it is a nectar producer.



Lemon Mint, Monarda citriodora – by Van Vives

Lemon Mint: The crushed leaves have a strong aromatic smell. The leaves have been used to make tea.



Compass Plant, Silphium laciniatum – by Van Vives

Compass Plant: Some Native Americans avoided camping where there was an abundant

crop of Compass Plant because they believed the plant attracted lightning. The root was used as a medicine to head colds and pain. The dried leaves were used for treating coughs and fever. Children chewed the resin that exudes from the stem as chewing gum.

NEWSLETTER PUBLICATION

—Andrew Donovan-Shead

Deadline for submission of articles for

inclusion in the newsletter is the 10th of each month. Publication date is on the 15th. All docents, Nature Conservancy staff, and university scientists are welcome submit articles and pictures about the various preserves in Oklahoma, but of course the Tallgrass Prairie Preserve in particular.

For scientists, this is your opportunity to talk for the general interest. We would like to read of your adventures and know what interesting things you are doing.

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