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Wild Ones®

NATIVE PLANTS, NATURAL LANDSCAPES

Reprinted from the
*Wild Ones Journal,*
Jan/Feb 2004 issue.

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Celebrating natives
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# The Grapevine

By Maryann Whitman

Stopping slugs in their tracks.
Where do our fossil fuels really come from?
Does Washington know what an invasive species is?
Recognizing Wild Ones' founders.
What's happening to the water in the Everglades?

**Stopping Slugs**
There are places on this Earth that support slugs and snails that are large enough to smother, with their slime, nestling birds in their nest. Most of us, however, only get to complain about our triflingly tiny, inch-long species as they decimate seedling beds and feast in our vegetable gardens. It is when we find them in our beds of prairie plant seedlings that Wild Ones members might be most interested in them.

Slugs travel on an acidic slime they secrete. When the snail or slug comes in contact with copper it causes a chemical reaction, a type of electrolysis, kind of a shocking sensation, and the snails will not cross it.

Snail-Barr is a 3-inch-wide, notched, pure copper band, that comes in 20-foot rolls, for snail and slug control for your garden, potted plants, hothouses, nurseries, raised beds, and trees. This product is a deterrent, not a killer. I've seen Snail-Barr, and the company has a web site, but I have not been able to come up with any pricing or availability information. Let me know if you can help with this.

**Some Big Numbers**
Every time we burn a liter of petrol we must consider that it took 23.5 tons of ancient buried plants to produce it. That's the equivalent of 16,200 square meters of live wheat – roots and stems included." So says ecologist Jeff Dukes, Carnegie Institution of Washington, Stanford. (1 ton (SI) or metric ton = 1000 kg (2204 lb.); 1 liter = 0.264172051 U.S. gallon; 1 acre = 4,046.9 square meters).

Roughly rounding the conversions, we come up with 95 tons or 200,000 pounds of primordial green stuff to produce one gallon of today's gas. In 1997 we burned fossil fuels equivalent to more than 400 times the amount of plant matter produced on Earth in the same year.

Modern ways to convert biomass into fuels such as ethanol are far more efficient. But it would still take nearly a quarter of all the plants on Earth to replace the fuel used in 1997. That's 50% more than humans already remove or pave over each year, says the Stanford researcher.

While admitting that his estimates have large degrees of uncertainty, he believes he has captured the essence of the process. "I just want to get people thinking about how unsustainable our uses have been."

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**"Invasive Species" in Washington DC**
According to the Economic Research Service within the U.S. Department of Agriculture, an "invasive species" is one that is:

- Non-native, alien, or exotic to the ecosystem under consideration, and
- When introduced, causes or is likely to cause economic or environmental harm, or harm to human health.

This definition covers everything from mad-cow disease, to zebra mussels, to, at the very far end of the concern spectrum, leafy spurge and spotted knapweed. The Department of Agriculture in October announced $1.5 million in grants and cooperative agreements to organizations in eight states to examine the economic effects of combating exotic pests and diseases.

So, we know that at least one or two people in Washington have the term "invasive species" in their vocabularies.

**Recognizing Our Founders**
Hal Sunken, President of the Green Bay Chapter WI, one of our oldest and most established chapters, reports that, in the spirit of "recognizing our founders," their chapter has chosen to honor two members:

- "To Paul Hartman, our local extension agent, who wrote the letter that started our local group, we have given a new book by William Jordan entitled The Sunflower Forest: Ecological Restoration and the New Communion with Nature. We also presented him with a check for $100 to put toward any project he deems necessary. He is currently involved in removing invasive plants from Brown County parks and we think this is where he will be using the money. As with most worthy government programs, it is under-funded.
- Our other award recipient was Dr. Jack Swelstad, (the national board of Wild Ones toured his prairie last June when Green Bay hosted the second quarterly board meeting.) He was our first president and still remains active with the group. We have presented him with a copy of the same book mentioned above, and in his name will donate $250 to the Wild Ones' Seeds for Education Program. We would like to have the entire amount donated to one school and have the class send a packet of pictures and notes back to us so we can forward them to Dr. Swelstad at some future time to remind him of the award and the impact he has had."

Hal reports that these awards were presented at the Chapter's first Annual Awards Banquet in November, 2003. The banquet was well attended and the chapter intends to have a second Annual Meeting in 2004.

**Everglades Hydrology**
A study by the U.S. Geological Survey recently reported in the journal Nature, that economically damaging freezes might have been avoided in southern Florida if the wetlands in those areas hadn't been drained years ago for farming. Draining of wetlands is one of the "multitude of ways humans are affecting the climate system," said one of the researchers from Colorado State University. The study showed that if the wetlands had remained untouched, temperatures in most of the areas would have stayed in the mid to upper 30s, avoiding a freeze. In other wetlands areas, the freeze would have happened, but it would have been less severe and shorter than the outcome calculated with the land switched over to sugar beet farming.

The duration of a freeze can be just as important as temperature for determining crop damage.

Wetlands can ward off freezes in two ways, the researchers said:

- • Standing water moisturizes the atmosphere, which can then better trap heat that radiates away from the ground at night.
- • Wetlands provide warmth because water can retain heat better than drained lands, and release heat when wetlands start to freeze.

The changes in the hydrology of southern Florida started in the 1920s when the Army Corps of Engineers built a 30-foot high barrier wall around Lake Okeechobee, isolating it from the Everglades that lie to the south. In 1950 they performed what has been called an environmental lobotomy; they forced the meandering, Kissimmee River, the largest tributary from the north to Lake Okeechobee, into a 56-mile long, straight ditch. A man-made plumbing system was built to capture rainwater and skirt it out to the fringes of Florida.

Originally, the water from Lake Okeechobee spread into a shallow, 50-mile-wide sheet and trickled at a pace of 100 feet per day, through sawgrass marshes and mangrove forests supplying the Everglades with its life-blood – sweet water.

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Today only half of the historic Everglades, which once covered 4 million acres stretching from a chain of lakes near Orlando to Florida Bay, still exists, and the water quality has deteriorated.

Cities developed along the coast and pushed inland, demanding clean water and releasing polluted water, polluted air from incinerators, and polluting the soil. Sugar cane plantations, vegetable farms, and dairy farms sprouted up around Lake Okeechobee, releasing fertilizers, pesticides, herbicides, and raw cow manure into the lake.

The Everglades has been drained, burned, and further mutilated by canals, levees, and highways. A series of reservoirs, called conservation areas, traps the water that once flowed freely. The wildlife population has plummeted. A fresh water crisis looms over the coastal cities.

Florida Bay, once a rich fish nursery, now features a 100-square-mile, algae-choked, "Dead Zone." The mangroves and sponges along Florida Bay are dying, fueling the algae blooms. The coral reef below the Keys is threatened.

Author Ted Levin, in his recently published book entitled Liquid Land: A Journey Through the Florida Everglades, writes of the history of exploitation of the Everglades, and gives a behind-the-scenes account of contentious, modern-day attempts to restore the hydrology of an area that is now "a computer-controlled watershed almost as artificial as Disney World."

Maryann is Editor of the Wild Ones Journal, and comes to the position with an extensive background in environmental matters of all kinds.