

An Amazing Amazon River Voyage

The Amazon River is the mightiest river in the world, according to some experts. Home to one of the most diverse ecosystems in the world, it drains some 40 percent of South America. Originating in the Andes Mountains of Peru, it travels eastward for more than 4,000 miles across South America through Brazil to the Atlantic Ocean.

Water levels may fluctuate over 40 feet throughout the year—the highest being in April and May. At its widest point during the rainy season, it can be up to 28 miles wide. Its discharge into the Atlantic is enough to supply New York City with fresh water for 9 years. The Amazon includes 1,100 tributaries and about 14,000 miles of navigable waterways. Hydrologists believe the Amazon begins as the Ucayali River which then merges with the Marañon to form the Amazon.

The Amazon Rainforest begins at the eastern edge of the Andes in Peru and is the largest rainforest in the world. Its conservation has been a major issue in recent years. It has great significance as its biomass is capable of absorbing enormous amounts of carbon dioxide and produces approximately 20 percent of the earth's oxygen. It is supported by the Amazon basin.

The biodiversity within the rainforest is extraordinary. The region is home to at least 2.5 million insect species, tens of thousands of plants, and some 2,000 bird and

Field Trip to Hitchcock - November 3

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Current Currents

By Elliott Bedows

The Newest Math—Counting Carbon Credits

Question: within the last 60 days, what do the National Audubon Society, *The Wall Street Journal*, *The Economist* and the National Geographic Society (among many others) all have in common?

Answer: they have been emphatic in expressing their concern over the use of Carbon Credits (CC's) in various ways these credits will ultimately impact global warming, economy and growth.

But first we have to realize that books can be written about this subject. So I will try to break down this topic into installments, the first of which is the one you're reading. So, what is carbon and how does it—or its "credits"—affect me. And while we're at it, let's toss in the entire Planet Earth too!!

Carbon, also known as "the atom of life," with some allied atoms forms both the molecules of life and is the namesake of one of the cycles that sustains life. Oxygen, another of the smaller naturally occurring elements, is one of these allied atoms. The two form the infamous compound called carbon dioxide, or CO₂. CO₂ is *the* issue behind CC's, greenhouse gas accumulation, and biofuel development.

At the center of this issue is one basic tenet: CO₂, a by-product of burning of carbon-containing compounds such as gasoline, oil, coal, paper products or wood, just to name a few, is a greenhouse gas. That means it will trap heat (usually solar) and raise Earth's temperature, leading to all sorts of undesired global side effects. There are other greenhouse gases, but none are produced anywhere near the rate that mankind produces CO₂. So burning fossil fuels unquestionably increases CO₂ output!

What is a Carbon Credit or CC? Does it really mean nothing because it's difficult to know how a CC compares to a loaf of bread, a gallon of gas, a pair of jeans, or even to a tree? The truth is that a CC is difficult to define, though it is frequently used in monetary terms. A Carbon Credit should be easily understood, but as the Signatories of Kyoto are finding out, its definition is hard to place in the context of our daily lives. "It would be nice to say that a Credit is equivalent to two trees growing to 50 years of age, but it really is not that simple at all,"

notes the web site

<http://savetheplanet.co.nz/carbon-wave-power-what.html> that is dedicated to CC education. (Please refer to that site for more details.)

As a recent essay entitled "Carbon's New Math" by Bill McKibben in the October 2007 *National Geographic* reveals, "To deal with global warming, the first step is to do the {math}." He points out that in the years just predating the industrial revolution, the Earth's atmosphere contained about 280 ppm CO₂, which equated to a mean global temperature of roughly 57⁰. Today we live on a planet that has an atmosphere containing CO₂ levels of 380 ppm, nearly 2⁰ warmer, but if the rate of emissions (just CO₂) continues to rise at its current rate (and doesn't even include the massive contributions expected from emerging nations like India and China), our CO₂ levels will be over 800 ppm. This means that the average temperature will be 9⁰ F warmer than it is currently. And scientists generally believe that CO₂ levels of 450 ppm will warm the earth sufficiently to melt the ice caps of Greenland and Western Antarctica.

So what can we do? Carbon Credits are a first attempt to cut back on emissions by charging the offenders taxes based on the CO₂ pollution they generate. But like any other form of currency, CC's can be traded. Some of these credits include drastic measures that many countries refuse to buy into. For example, while coal is currently one of the most polluting forms of energy known, China is putting an average of about one coal-burning plant on line per week (yes, per week, not per month). There are good and bad aspects to the trading of CC's, and in upcoming installments, I'll try to summarize many of these which range from burning cow manure to reverting to nuclear energy.

In the meantime, I'll leave you with the 15-step plan devised by a U.N. panel on climate change. Each step would be expected to reduce emissions by a billion metric tons. If all were to be

implemented across the planet, a zero net gain in CO₂ levels would be attained, at a cost of less than 0.1 percent of the world's economy.

Sounds simple, doesn't it? Let's see how many of these you would be willing to do and pay for, and how many

Continued on page 4

3

Wildlife Artist Robert Bateman Exhibit at Joslyn

"The Art of Robert Bateman" and companion exhibition "Karl Bodmer's Animals" will open at Joslyn Art Museum Saturday, November 24, closing February 3. Approximately 75 works of wildlife artist Robert Bateman will be exhibited, along with approximately 40 works of Bodmer's.

The retrospective exhibit is a major tribute to Canadian artist Robert Bateman, whose wildlife art has earned him an international reputation and following. Bateman's paintings are a celebration of wild things and wild places, evoking beauty and splendor of the world around him, whether a pair of loons gliding serenely across a lake or a peregrine diving after a swift.

Though recognized by peers worldwide as the most influential wildlife painter of our time, Bateman's subjects range from architecture, the human figure, land- and seascapes, still lifes, and portraiture. He also explores other media, including prints, jewelry, and sculpture.

Next spring, Audubon members will have a chance

to hear Bateman speak. He will be featured at the Rivers & Wildlife Celebration in Kearney March 24-26.

Also on exhibit are Karl Bodmer works which resulted from his study of American fauna. Less well known than his portraits of American Indians and Missouri Valley landscapes, they are a valuable record of his journey in North America.

For more information, contact Amy Rummel at Joslyn, 342-3300 ext. 283 or arummel@joslyn.org. The artist's website is www.robertbateman.ca

Museum admission is \$7 for adults; \$5 for senior citizens (62+), children \$4 (ages 5-17). Joslyn members and children under 5: free. Admission is free for the general public on Saturdays, 10-noon. A free Family Fun Day will be held Sunday, January 27, from 1-4 pm.

A special event will be held Friday, November 30, at 6:00 pm, with a reception, exhibition viewing and gallery talk by Bateman, followed by dinner. Tickets are \$75 per person. To receive an invitation or make a reservation, call (402) 661-3834.

The museum is closed Mondays and major holidays; open Tuesday through Saturday, 10-4:00; Sunday 12-4:00. Guided tours are available Wednesdays at 1 pm and Saturdays at 10:30 am and/or 11:30 a.m. Group tours are available during the week and on select weekends with advance reservations.

**Robert Bateman
(Canadian, born 1930)
Red-crowned Crane Pair,
©2001, acrylic on board,
Private Collection**

Field Trip, *Continued from page 1*

the birds stop flying, though others may want to quit earlier.

Please pay attention to the weather for that day (which can be extremely

Sale Items

In anticipation of the gift-giving season, ASO has a number of items of interest we will be offering at the November 8 general meeting.

variable) and dress accordingly. Also bring a lunch if you plan on birding all day.

The Hitchcock Nature Center is located 5 miles north of Crescent, IA, off Old Lincoln Highway.

See you there.....the eagles should be there in numbers if the weather cooperates.

P.S. Wachiska members, please feel welcome to join us! (**Ed. Note:** Warm headgear is especially helpful. The winds on the tower can be strong and surprisingly cold. (AmI taking the role of your mother?)

These include a beautiful life list book and "Wildflowers of Fontenelle Forest and Neale Woods" by Roland Barth and Neal Ratzlaff. Also, attractive books will be available for "donations only."

And there are more items: attractive Sandhill Cranes (small size—for a desk or shelf—in pewter), polos, t-shirts (long and short-sleeved and in several colors), and ball caps.

Water, Water

By Kathy Schwery

Water is one of the most basic necessities of life. The right to have access to clean water is critically important, so it is no surprise that several bills dealing with water issues are currently in different stages of enactment in Congress.

Passed in 1972, the Clean Water Act applied to all surface water bodies in the United States, set standards and requirements, and established powers and penalties. In a divided opinion, the Supreme Court in 2006 created confusion as to the protection of as much as 50% of America's waters. New legislation supported by Audubon—the Clean Water Restoration Act of 2007—would restore the traditional scope of protection.

The Clean Water Act is increasingly under threat from developers and others who would like to weaken the ability of the Environmental Protection Agency to protect our waters. We need to contact our Congressmen and ask that they support the Clean Water Restoration Act of 2007.

Another water bill, the Clean Water Protection Act, would protect streams and rivers which are threatened with pollution and obliteration caused by mountaintop removal mining. If you saw the short article and stunning pictures of mountaintop destruction in the *Audubon Magazine* March-April issue, you are aware of the tremen

dous damage caused by this type of mining. After the top of the mountain is blasted off, the debris is dumped in valleys below, choking off streams and filling rivers with polluted material.

The Clean Water Protection Act would prohibit this practice because it would "clarify that fill material cannot be comprised of waste." Again, we need to contact our representatives in Congress and ask that they support this measure.

Within the past week, a third water bill, the Water Resources Development Act, was passed with overwhelming support by Congress. It is expected that President Bush will veto the bill, citing cost as the reason. The Water Resources Development Act would have authorized more than \$5.5 billion in ecosystem restoration funding. Some of the key priorities would have been the Florida Everglades, the Mississippi River, Coastal Louisiana and Great Lakes.

It has taken five years of effort by environmental groups, especially National Audubon, who made it a priority to get this legislation passed. During that time, ecosystems have continued to degrade. Since the measure passed with such a huge majority, it is hoped that Congress will override the President's veto and allow this important piece of legislation to go forward.

Counting Carbons, *Continued* from page 2

you think everyone else would agree to and pay for as well.

• Increase the fuel efficiency of the 2 billion cars and trucks on the road to 60 mpg

gas-fired plants

• Displace coal by increasing nuclear power to three times current capacity

• Increase wind-generated power by 25 times current capacity

- Reduce miles traveled annually per vehicle from 10,000 to 5,000 miles per year
- Increase heating, cooling, lighting and appliance efficiency by 25%
- Increase coal-burning plant efficiency by 20%
- Introduce systems to capture CO₂ and store it underground at 800 large coal-fired or 1600 natural gas-fired plants
- Use capture systems at coal-derived hydrogen fuel plants to fuel a billion cars
- Use these or similar systems to produce 30 million barrel equivalents of fuel daily
- Replace 1400 large coal-fired plants with natural

- Increase solar power to 700 times current capacity
 - Increase wind power to 50 times current capacity to make hydrogen for cars
 - Increase ethanol biofuel production 50 times, which would require 1/6th of all currently available farmland
 - Stop all deforestation
 - Expand conservation tillage to all cropland. (Normal plowing releases carbon via rapid decomposition.)
- And, most importantly, don't shoot me. I'm just the messenger!

Spring Creek Prairie Field Trip

By Elliott Bedows

Phil Swanson

Eric Scholar

Phil Swanson

Sprague's Pipit

ASO and Wachiska held a joint field trip to Audubon's Spring Creek Prairie on Saturday, October 20. Attending were 18 participants (compared to the "0" of last year during a sleet storm). We had ideal weather, except for late A.M. winds, and we tallied 44 species, although we connected on only one of our three target species.

Highlights were 15 species of sparrows and pipit. Because of the dynamics of the large party that soon split into 4 distinct sub-groups, the numbers represent absolute minimums of individuals seen by the entire group:

Last Bird Banding of the Fall at Neale Woods Nov. 3

Bridge at the Prairie

Pied-billed Grebe (1) — trying to eat a fish as big as itself. Quite a sight.

Northern Harrier

Sharp-shinned Hawk

Franklin's Gull (50+)

Ruby-crowned Kinglet

Sprague's Pipit (10) - see photo

Orange-crowned and Yellow-

Harris' Sparrow

rumped Warblers

Eastern Towhee

Sparrows: Chipping (15), Vesper (20+), Grasshopper (10+), Henslow's (2), Fox, (2), Song (20), Lincoln's (10), Swamp (4), White-throated (1), White-crowned (20), and Harris (20)

Western Meadowlark (1 - singing -so late in the year)

2008 Refuge Photography Contest

The National Wildlife Refuge Association announces the 2008 Wildlife Refuge Photo Contest, dedicated to showcasing the NWR System's rich diversity of wildlife and habitat. Entries are meant to help promote this magnificent 100-million-acre federal lands system, a

include outstanding products and offers from each of NWR's valued contest sponsors: Canon, Wild Bird Centers, Zenfolio, Steiner, TrekTech, Steiner and others.

Results will be announced in March 2008 at the 105th anniversary of the establishment of the first National Wildlife Refuge

The last bird banding of the fall will take place on Saturday, November 3, at Neale Woods Nature Center from 9:00 am to 12:00 noon.

Come to see birds in the hand, learn, and watch or participate in the birds' release.

For more information call Fontenelle at 731-3140.

centerpiece of conservation in America.

Entrants may submit up to 10 digital photos taken at a national wildlife refuge within the last two years. The photos must be submitted through the contest's website, www.refugenet.org. The deadline for submission of entries is December 15, 2007.

The grand prize, donated by Toyota Motor Sales USA, is a 2008 Highlander Hybrid. Other top prizes

All winners will have their images showcased in future NWRA publications, and at least 200 top images will be selected for inclusion in the NWRA Refuge Image Library

A new Youth Category has been created to which children and young adults can submit their images.

For more information, visit the above web address and click on "2008 Refuge Photo Contest."

The Ubiquitous Water Bottle

by Laurine Blankenau

An enormous amount of plastic for water bottles is produced every day for the convenience and presumed safety of all. Some of us view bottled water as a necessary accessory of daily life.

But problems with the plastic bottle abound. Predictably, much of this plastic ends up going to the dump rather than the recyclers. And appallingly, approximately 1.5 million barrels of crude oil is used to create the plastic in one year's worth of bottled water. Transportation costs push up the use of oil in supplying the thirst for bottled water. Also, what some of us may not know is that the FDA's standards for the bottled water industry are actually weaker than the EPA's standards for public water.

From an item in "Audubon in the News," the following are some disquieting facts about bottled water, as well as some useful advice.

One study found that 25% of suppliers use filtered tap water in the plastic bottles—easily replaced by that in our own kitchens. Effective water filters can be found at

http://www.waterfiltercomparisons.net/WaterFilter_Comparison.cfm.

Or go to http://heartspring.net/water_filters_guide.html for more information about the filters.

Another and more serious concern of the plastic water bottle is the leaching of toxins from the plastic into the water. A study at Case Western University revealed that the hormone disruptor bisphenol-A (BPA) can leach from Lexan polycarbonate resin (used to make the popular Nalgene bottle). A study found that BPA can leach from the water bottle at room temperature while direct sunlight exposure increases the chance of BPA leaching. Those most vulnerable to hormone disruptors are children and

pregnant women.

We often need to carry water with us, so we need a substitute container to replace the plastic bottle, but what sort? One concerned person asked Audubon and received this recommendation: trade plastic for stainless steel bottles, which are available on the market and are safe and lightweight.

We are advised that whether made of stainless steel or plastic, the water bottle needs to be rinsed frequently. Either vinegar and water (vinegar is proven to kill 99% of germs and bacteria) or soap and water are effective; the bottle should then be allowed to dry thoroughly.

We can buy water and take care to recycle the bottles, but it is cheaper to buy a filter (it's more costly to buy the dozens of water bottles we are likely to schlep around in a year) and healthier to find a substitute for the ubiquitous plastic water bottle. More importantly, it is easier on the planet.

Autumn in the Bluffs

"Autumn in the Bluffs" deserved the more apt title of "Summer in the Bluffs" on Saturday, October 6, when several ASO members worked at the festivities at Council Bluffs' Bayliss Park. The fountain played, flashing swords (fencing) drew onlookers, and a cast from the Shakespeare Festival performed excerpts from "Romeo and Juliet." Stained glass objects, jewelry and other craft items were available in the Library.

We were there to promote Audubon and our chapter to our friends across the

I long for wildness, a nature which I cannot put my foot through, woods where the Wood Thrush forever sings, where the hours are early morning hours, and there is dew on the grass, and the day is forever unproved.

river who arrived in great numbers, seemingly undaunted by the near-90 degree heat. The response was gratifying, revealing a lively interest in our environmental cause.

Patty and Butch Albright, Nelli and Randy Falzgraf, Ruth Demarest and Laurine Blankenau endured the heat and enjoyed talking with the crowds. Thanks to them for helping with the heavy work and greeting the public. Kudos to Patty, who organized the event. The Sunday continuation never happened because of the predicted rains that caused the event to be canceled early. By noon the sun came out, the warmth returned, and the fountains splashed, presumably to a smaller crowd.

Audubon Society

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Washington D.C. 20500-0001

Comments: 202-456-1111; fax:
202-456-2993

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U.S. Senate, Washington DC
20510; 202-224-6551; fax 202-228-
0012; Lincoln: 402-437-5246;
Omaha 391-3411; Omaha address:
7602 Pacific St, #205, 68114

Senator Chuck Hagel

U.S. Senate, Washington, D.C.
20510-2705

Omaha Address: 9900 Nicholas St,
Suite 325,

Omaha 68114

Phone: (202) 224-4224; Fax: (202)
224-5213

Omaha phone: (402) 758-8981

Representative Lee Terry

U.S. House of
Representatives, Washington, DC
20515

Phone: (202) 225-4155 ; Fax: (202)
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When sending your gift, please identify the person you wish to memorialize and the name and address of the person to be notified.

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If you find an
injured bird of prey,
please contact a
Raptor Recovery
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Bequests

A bequest to Audubon is a gift to those who will
succeed us; a gift to secure our natural heritage.

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