

From: [Ellie Cohen](#)
To: [Ellie Cohen](#)
Subject: Ecology, biodiversity, climate change and related news updates -October 14, 2011
Date: 10/14/2011 02:02 PM

Hi all,

Ecology, birds, biodiversity, climate change and other news updates—[October 14, 2011](#)

Highlights of the Week: Framing Science, Conservation and Climate Change

1- [**ECOLOGY, BIODIVERSITY, AND RELATED**](#)

2- [**CLIMATE CHANGE AND EXTREME EVENTS**](#)

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Best wishes--

Ellie

NOTE: Please feel free to pass on my weekly news update for [PRBO Conservation Science](#) staff.

The information contained in this update was drawn from www.sciencedaily.com, <http://news.google.com>, www.climateprogress.org, www.slate.com, www.sfgate.com, [The Wildlife Society NewsBrief](http://www.wildlifesociety.org) and other sources as indicated. This is a compilation of articles and other information available on line which were not verified and are not endorsed by PRBO Conservation Science. Please email me directly if you want your name dropped from or added to this list.

Highlight of the Week: Framing science, conservation and climate change

- The Frameworks Institute (www.frameworksinstitute.org) -- to advance the nonprofit sector's communications capacity by identifying, translating and modeling relevant scholarly research for framing the public discourse about social problems. See [this PDF about climate change and oceans](#).
- www.climateinterpreter.org "is a resource for all of us who have pledged to improve public understanding of climate change and take serious steps toward sustainability at our institutions and in our own lives as citizens. This website is here to provide an online community platform for climate change educators and communicators near and far. It is a space to connect and share with one another our collective experiences and insights discussing global climate change with a broad range of audiences, and the steps we are all taking to address the issue as a whole."
- [A GOOD Transparency video on water conservation](#): Thirsty? So is everyone else. We're headed for a water shortage. Here's how simple daily choices can reduce your water use.

1- ECOLOGY, BIODIVERSITY, AND RELATED

PRBO in the news:

[Conservationists and Rice Farmers Agree: Project is for the Birds](#)

DAVIS, Calif., Oct. 7, 2011 /PRNewswire via COMTEX/ -- Seventy rice farmers in Glenn and Colusa County have signed contracts to participate in a \$2.68 million pilot project with USDA's Natural Resources Conservation Service to modify their rice fields and production practices to benefit shorebirds and

waterfowl. In the Migratory Bird Habitat Initiative (MBHI), rice farmers will engage in a number of practices strategically targeted to benefit the birds' migratory and breeding needs. Under MBHI, for example, rice farmers will flood their fields earlier or maintain the water longer in the season--and at the depth specifically needed at critical points in the season. "In general shorebirds and many waterfowl require shallowly flooded habitat, 2-6 inches deep," says **Alan Forkey, Assistant State Conservationist for NRCS**. "Rice fields are often deeper than that. Also, rice farmers often pull the water off their land in January but under MBHI they will keep it on longer and withdraw the water more gradually." Forkey says. Additionally, rice farmers will be shaping the levees between the fields to better accommodate the birds' nesting and resting needs. Sloped levees will be flattened providing a better nesting surface and shoulders that make it easier for chicks to navigate from nests to water. Some farmers will also provide artificial nesting structures. In many ways this is the culmination of years of scientific, agronomic and outreach work between conservationists and rice farmers. The California Rice Commission, Audubon California, **PRBO Conservation Science** and other groups partnered with NRCS for over a decade. "Together we have tested practices that seem to really make a difference to waterbirds that are also acceptable to rice farmers," said Paul Buttner of the California Rice Commission.....

Tiny mice could cause big upset on Farallon Islands VIDEO and STORY

Thursday, October 13, 2011 THE FARALLON ISLANDS (ABC/KGO) ---There are 13 national marine sanctuaries in the United States and one of them is -- The Farallon Islands -- 27 miles outside the Golden Gate Bridge. ABC7 got a rare look at the islands and the little mouse that's threatening to upset their entire ecosystem...But with an autumn sunrise behind us and 27 miles of open sea ahead, the United States Fish and Wildlife Service made an exception on Thursday, for a select group of reporters who saw a place so rough and raw that to land, we boarded a small boat, were plucked from the water by crane, carried through open air, and placed on a dock. They have done it this way for more than a century. Up close, you can see how The Farallones consist of crumbly granite. The 70 acres of main island are a foreboding place, manned year round by five naturalists from **the Point Reyes Bird Observatory [PRBO Conservation Science]**.....



New computer program promises to save the whales (October 11, 2011) —

Researchers at the University of Montreal have developed a computer programme that enables regulators to evaluate the ecological and economic tradeoffs between marine mammal conservation, whale watching and marine transportation activities in the Saint Lawrence Estuary. "The objective is to reduce the collision risk with whales while taking into account the impact on industry and marine transportation," said Lael Parrott, who headed the research team. The model, developed in her Complex Systems Laboratory, maps the estuary where the field research was undertaken, simulates the comings and goings of five mammal species (minke whale, fin whale, beluga, humpback and blue whale), the presence and movements of three types of boats (recreation, excursion and cargo), and environmental conditions. Nine scenarios were elaborated in order to observe the effects of various decisions. The system was developed following a request from Parks Canada and Fisheries and Oceans Canada. It is based on real conditions observed in the estuary since 1994 and takes into account human behaviors based on interviews with captains and shipping pilots..... > [*full story*](#)



[Gray jays' winter survival depends on food storage, study shows](#) (October 10, 2011) -- A new study shows that gray jays hoping to survive and reproduce through Canada's harsh winters need to be able to store food in the right kinds of trees. ... > [full story](#)

[Antarctic mission to find new signs of life](#)

BBC News - October 11, 2011

British scientists are heading to the Antarctic to try to reach a lake two miles under the ice. Lake Ellsworth's been cut off from the world for at least 125000 years and the scientists will use a hot-water drill to melt their way through to it.

[Big catches mask big decline in sea bass](#)

Tony Barboza, Los Angeles Times Friday, October 7, 2011 **LOS ANGELES** -- As reliably as masses of sea bass gather off the Southern California coast each summer, boatloads of anglers arrive to reel them in.

But their bountiful catches are an illusion, scientists say. The populations of kelp bass and barred sand bass, two of the most popular - and easy to catch - saltwater fishes in Southern California, have plummeted 90 percent since 1980, according to a study led by a researcher at the Scripps Institution of Oceanography at the [University](#) of California at San Diego. Overfishing and warmer ocean temperatures are blamed for the stunning decline.

[Reptile, amphibian BioBlitzes tap social media](#)

Debra Levi Holtz, SF Chronicle San Francisco Chronicle Copyright San Francisco Chronicle. All rights reserved. This material may not be published, broadcast, rewritten or redistributed. Monday, October 10, 2011 Scientists, in a new effort to track the world's declining populations of reptiles and amphibians, are harnessing the popularity of social networking to gather data on the captivating creatures and help prevent more of them from going extinct..... anyone with a camera and an interest in reptiles and amphibians can upload a photo to a website that links "citizen scientists" with researchers working to preserve them. The Global Reptile BioBlitz was launched last month to keep virtual tabs on the more than 9,000 recognized species of turtles, snakes and other reptiles around the globe. It builds on the success of its sister project, the 3-month-old Global Amphibian BioBlitz, which has already collected information on 750 distinct species - more than 10 percent of the world's amphibians - from participants in 55 countries. Of the species already documented, 190 of them are considered threatened or endangered.... Both efforts are a partnership among AmphibiaWeb, an Internet database hosted by UC Berkeley's Museum of Vertebrate Zoology; a group of international herpetology organizations; and the Bay Area social network iNaturalist.org. "Amphibians have been decimated in the past few decades," said Scott Loarie, a postdoctoral fellow at the Carnegie Institution for Science at Stanford [University](#). Recent estimates suggest that a third of all amphibians are threatened with extinction and 168 species have disappeared, a trend scientists fear will worsen. Loarie blames the disappearance of amphibians and reptiles on diseases brought on by climate change and habitat loss as well as irresponsible private collecting. Unlike birds that can migrate more swiftly and easily, Loarie said amphibians and reptiles don't move around a lot and usually inhabit small areas. And until now, birds have had another advantage: More is known about them because bird enthusiasts have more venues through which to

share information such as the annual Christmas Bird Count conducted by the National Audubon Society. The intent of the BioBlitz surveys is to change that by creating online communities of reptile and amphibian aficionados. Coordinators say that with limited funding for scientific fieldwork, partnering with amateur enthusiasts will help scientists better understand where these species live....



[A new species of 'gigantic' mollusc has been discovered in the Antarctic waters](#) (October 8, 2011) -- Researchers have discovered a rare mollusc in Antarctic waters that looks the same as limpets but is bigger in size than the species known to date. The specimen appeared in waters much further away from where this type of species is normally found. ... > [full story](#)



[Reefs recovered faster after mass extinction than first thought](#) (October 8, 2011) -- Metazoan-dominated reefs only took 1.5 million years to recover after the largest species extinction 252 million years ago, paleontologists have found, based on fossils from the southwestern United States. ... > [full story](#)



[Most vertebrates -- including humans -- descended from ancestor with sixth sense](#) (October 11, 2011) -- A new study that caps more than 25 years of work finds that the vast majority of vertebrates -- some 30,000 species of land animals (including humans) and a roughly equal number of ray-finned fishes -- descended from a common ancestor that had a well-developed electroreceptive system. ... > [full story](#)

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2- CLIMATE CHANGE AND EXTREME EVENTS

[Why climate models underestimated Arctic sea ice retreat: No Arctic sea ice in summer by end of century?](#) (October 12, 2011) -- In recent decades, Arctic sea ice has suffered a dramatic decline that exceeds climate model predictions. The unexpected rate of ice shrinkage has now been explained. Researchers argue that climate models underestimate the **rate of ice thinning, which is actually about four times faster than calculations.** This model bias is due to the poor representation of the sea ice southward drift out of the Arctic basin through the Fram Strait. When this mechanism was taken into account to correct the discrepancy between simulations and observations, results from the new model suggested that there will be no Arctic sea ice in summer by the end of the century. ... > [full story](#)

[Climatic tipping points for tropical forest and savanna: Satellite data reveal where they are most vulnerable](#) (October 14, 2011) -- Tropical tree cover will jump sharply between a forested state and savanna or treeless conditions rather than respond smoothly to climate change, according to a new study. ... > [full story](#)



[Ancient climate change has left a strong imprint on modern ecosystems](#) (October 10, 2011)

-- As Earth's climate cycles between warm and cool periods, species often must move to stay within suitable conditions. Scientists have now mapped how fast species have had to migrate in the past to keep up with changing climate. **They found that small-ranged species – which constitute much of Earth's biodiversity – are concentrated in regions where little migration has been required. Predicted climate change will drastically increase the required migration rates in many of these locations, putting their unique faunas at risk.** ... > [full story](#)

[Masters on “Unprecedented” Arctic Ozone Hole: Inaction Risks “Future Nasty Climate Change Surprises Far More Serious”](#)

Posted: 09 Oct 2011 03:13 PM PDT

Dr. Jeff Masters:

An unprecedented ozone hole opened in the Arctic during 2011, [researchers reported this week](#) in the journal *Nature*.... We know that an 11% increase in UV-B light can cause a 24% decrease in winter wheat yield (Zheng *et al.*, 2003), **so this year's Arctic ozone hole may have caused noticeable reductions in Europe's winter wheat crop....It is highly probable that we will see future nasty climate change surprises far more serious than the Arctic ozone hole if we continue on our present business-as-usual approach of emitting huge quantities of greenhouse gases.** Humans would be wise to act forcefully to cut emissions of greenhouse gases, as the cost of inaction is highly likely to be far greater than the cost of action.

Joe Romm: This important finding almost qualifies as an “[unknown unknown](#),” in that this impact was considered unlikely. And if it harms Europe's winter wheat crop, it could seriously add to the world's growing food insecurity (see “[Global Food Prices Stuck Near Record High Levels](#) and links therein. Meteorologist Dr. Jeff Masters has [a great post](#) on this, which I reprint below:

.....**COMMENTARY:** The development of an ozone hole in the Arctic is a discouraging reminder that humans are capable of causing harmful and unexpected planetary-scale changes to the environment. A 2002 assessment of the ozone layer by the World Meteorological Organization concluded that an Arctic ozone hole would be unlikely to occur, due to the lack of a strong Arctic vortex in winter, and the fact CFCs levels had started to decline. However, an Arctic ozone hole may now become a regular visitor in the future. “Day-to-day temperatures in the 2010 – 11 Arctic winter did not reach lower values than in previous cold Arctic winters,” [said](#) the lead author of this year's *Nature* study, Gloria Manney, of NASA and the New Mexico Institute of Mining and Technology in Socorro. “The difference from previous winters is that temperatures were low enough to produce ozone-destroying forms of chlorine for a much longer time. This implies that if winter Arctic stratospheric temperatures drop just slightly in the future, for example as a result of climate change, then severe Arctic ozone loss may occur more frequently.” I might add that its a very good thing CFCs were banned in 1987, or else the Arctic ozone hole would have opened up much sooner and would have been far worse. It turned out that the costs of the CFC ban, while substantial, were far less than the dire cost predictions that the CFC industry warned of. It is highly probable that we will see future nasty climate change surprises far more serious than the Arctic ozone hole if we continue on our present business-as-usual approach of emitting huge quantities of greenhouse gases. Humans would be wise to act forcefully to cut emissions of greenhouse gases, as the cost of inaction is highly likely to be far greater than the cost of action.

Pakistan floods show Asia's vulnerability to climate change

Oct 11, 2011 12:18 BST **REUTERS By Lord Julian Hunt and Professor J. Srinivasan.** *The opinions expressed are their own.*

It is more than a year since the devastating July and August 2010 floods in Pakistan that affected about 20 million people and killed an estimated 2,000. Many believe that the disaster was partially fuelled by global warming, and that there is a real danger that Pakistan, and the Indian subcontinent in general, could become the focus of much more regular catastrophic flooding. Indeed, right now Pakistan is again experiencing massive flooding. The UN asserts that, already, more than 5.5 million people have been affected and almost 4300 are officially reported dead, 100 of them children.there is growing recognition that global warming is dangerously linked to several significant threats, including not just natural disasters, but also energy, water, and food shortages as average rising temperatures reduce productivity and agricultural land is threatened by sea level rises and salinification of coastal areas. Following the combination of last year's Pakistani floods, and the exceptional heat waves in Russia, there is also now greater understanding in the region about the links between continental-scale weather events, and hence global risks to food availability. These linkages are likely to be exacerbated by adjustments in the patterns of atmosphere and ocean movements. Reflecting this heightened concern, Asian prime ministers, legislators and business leaders are increasingly supporting new climate-related legislation, investments and research. They are also leveraging their growing influence at the United Nations to help secure a comprehensive, global warming deal. This significant shift in Asian elite opinion has occurred despite the fact that it is now largely acknowledged within the region as unrealistic to expect total emissions from developed countries to be significantly reduced over the next few decades. Disappointment is often expressed, in particular, that the United States and Canada have no effective plans to follow European Union countries and Australia in introducing effective measures to make reductions. There are numerous specific ways in which this "Asian consensus" on climate change is manifesting itself across the region.....

Baltic Sea contributes carbon dioxide to the atmosphere, study shows (October 11, 2011) -- The Baltic Sea emits more carbon dioxide than it can bind. Local variations have increased the exposure of the Bay of Bothnia. These are the results from a study of how carbon dioxide flows between the water of the Baltic Sea and the atmosphere, carried out by scientists in Sweden. ... > [full story](#)

Long-lost Lake Agassiz offers clues to climate change (October 11, 2011) -- What caused water levels to drop in immense yet long-vanished Lake Agassiz? New research suggests that conditions 12,000 years ago encouraged evaporation. Not long ago, geologically speaking, a now-vanished lake covered a huge expanse of today's Canadian prairie. Although Lake Agassiz is gone, questions about its origin and disappearance remain. Answers to those questions may provide clues to our future climate. ... > [full story](#)

Global Warming Damaging Australian Alps, Seen to be Bare by 2050

International Business Times AU - Oct 10, 2011

Have skis. But where's the snow? The Australian government and populace may need to divert some of its focus from staging a continuous mining boom to augment its economic stability to laying down immediate strategies to curb global warming if it wants to save its world-renowned Australian Alps. The Caring For Our Australian Alps Catchments reports that climate change had threatened the Alps, with rising temperatures slowing melting away its natural snow. The

Australian Alps could be completely bare of natural winter snow by 2050. The report, commissioned by the Australian government, found declining snow in 60 percent of the Alps' 235 Catchments covering Victoria, NSW and the ACT....

[Climate change could shrink chocolate production: report](#)

Los Angeles Times - October 12, 2011

Scientists say **climate change** will eventually claim many victims — including, according to a new report, chocolate. Ghana and the Ivory Coast — which produce more than half of the global cocoa supply — could take a major hit by 2050...currently, the optimal locations to grow the crop are about 330 feet to 820 feet above sea level, with temperatures of about 72 degrees Fahrenheit to 77 degrees. That range will soar to 1,500 feet to 1,640 feet in four decades to compensate for hotter weather.... **“Climate change brings not only bad news but also a lot of potential opportunities,” according to the report. “The winners will be those who are prepared for change and know how to adapt.”** Fluctuating weather in the United States alone has already wreaked havoc with harvests for [peanuts](#), [wine grapes](#), pumpkins and [coffee beans](#).

[Bacterial communication could affect Earth's climate, researchers discover](#) (October 13, 2011) -- Woods Hole Oceanographic Institution (WHOI) scientists have discovered that bacterial communication could have a significant impact on the planet's climate. ... > [full story](#)

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3- **OIL SPILLS and RELATED**

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[Oil spill disaster New Zealand's 'worst in decades'](#) BBC Oct 11, 2011

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[Bombshell: State Department Outsourced Tar Sands Pipeline Environmental Impact Study to 'Major' TransCanada Contractor](#)

Posted: 08 Oct 2011 12:10 PM PDT

[Study: Gulf Seafood Unsafe for Pregnant Women and Children?](#) October 14, 2011

Is Gulf seafood safe to eat? The Food and Drug Administration (FDA) gave the green light following the BP oil spill that dumped nearly 5 million barrels of crude off the coast of Louisiana last year, but now an environmental watchdog group says the agency's standards are "based on outdated science" and underestimate the risk of cancer-causing contaminants to pregnant women and children eating seafood from the Gulf....

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4- **POLICY**

NZ to veto total protection of Ross Sea

MICHAEL FIELD 11/10/2011 New Zealand is set to veto any attempt to completely protect the world's last unexploited ocean - so a lucrative fishing industry can continue operating. An official New Zealand document leaked to Fairfax reveals Wellington, backed by the US, does not want the whole 650,000 km² Ross Sea declared a marine protected area (MPA), despite a 25-nation convention saying it is "of high global importance". Maps in the document written by the Ministry of Fisheries show a large area of the Ross Sea is excluded from a marine park. It means the fishing industry can keep taking toothfish, discovered by New Zealand in 1996, worth \$18 million a year....The move will shock about 500 international marine scientists behind The Last Ocean Project, a US-based campaign that won international attention during the saga of Happy Feet, the emperor penguin....Earlier this year influential American biologist David Ainley warned New Zealand's approach and industrial fishing threatened permanent change. "Over a million of these large predatory fish are now gone, along with the 1000 year old sponges ripped up in the long-lining process. An increasing group of scientists feel this fishing has to stop." With sharks largely absent from the Ross Sea, toothfish, a massive carnivorous, play a key role in the ecosystem...

Canadian firms warming to climate-change measures

Globe and Mail - October 12, 2011

Canadian companies, once leery of the costs and headaches of dealing with **climate change**, now realize that it may provide a significant business opportunity.

Poll: European Concern About Climate Change Grows

ABC News - October 7, 2011

Those who doubt the earth's climate is changing are a diminishing breed in Europe, according to a new survey released Friday. It shows large majorities in the European Union see **climate change** as a very serious problem - and fighting ...

With warming predicted, new center at UMass to study climate change

Boston Globe - October 7, 2011

The federal government today awarded the University of Massachusetts at Amherst a multimillion-dollar grant to host one of eight centers around the country to study the local effects of **climate change**. The Northeast Climate Science Center will study how climate change affects ecosystems, wildlife, water, and

other resources from the Great Lakes to Maine and down to Missouri. The \$7.5 million grant over five years will sponsor research at UMass-Amherst as well as at institutions in Wisconsin, Minnesota, New York, and Massachusetts. “The nationwide network of Climate Science Centers will provide the scientific talent and commitment necessary for understanding how climate change and other landscape stressors will change the face of the United States,” said US Interior Department Secretary Ken Salazar in a statement....

UOG joins regional climate change consortium

Pacific Daily News - October 10, 2011

Secretary of the Interior Ken Salazar announced today the establishment of the Pacific Islands Climate Science Center, a consortium led by the University of Hawai'i at Manoa, the University of Hawai'i at Hilo, and the University of Guam, according to a ...

Europeans more worried about climate change than economic crisis

TG Daily – October 10, 2011

Climate skeptics are a dying breed in Europe, a new poll shows, with two out of three people seeing **climate change** as a very serious problem.

Geek Farmers Gamble on Global Warming

Forbes - October 12, 2011

The San Francisco, CA-based company peddles a portfolio of what it calls “automated weather insurance products” for players in the \$3 trillion **global** agriculture industry trying to reign in the risk of bad weather, which is responsible for more than .. For 2011, the company is projecting an 1,000% increase in policies sold, premiums purchased and acres of farmland protected.It is only a matter of time before competitors wise up to the business opportunity emerging in the so-called “[climate services](#)” sector.

[Richard Muller](#) By Kenneth Brower The Atlantic Nov 2011

Physicist, University of California at Berkeley Berkeley, California

A scientist, suspicious of manipulated climate-change data, bucks expectations and presents the evidence for man-made global warming.

.... Muller is not a climate-change denier. He concedes that the world is warming and that human enterprise is playing a role. He insists, however, that it's unclear just how much temperature trends correlate with greenhouse-gas emissions. And when hacked e-mails from climate scientists caused global-warming skeptics to cry foul and accuse the experts of manipulating data, Muller chimed in to suggest that his comrades in science might not be so trustworthy. The skeptics, he said, had legitimate concerns. He saw risks of bias everywhere in the existing climate research. And so, in 2010, he gathered a team of physicists and statisticians—the Berkeley Earth Surface Temperature project (BEST)—and set out to evaluate findings on global temperature trends from NASA, NOAA, and a research group in the U.K. He would use the same data those agencies did.

Muller's project is funded in part by the foundation of one of the oil-billionaire Koch brothers, and his invitation to testify this spring before the House Committee on Science, Space, and Technology was orchestrated by Republicans. To plenty of spectators, that was really all we needed to know. The conservative Koch brothers have a right to the scientific answers they pay for. Then came Muller's testimony. Confounding expectations, he reported "a global warming trend that is very similar to that previously reported by the other groups." In his testimony, he cited data indicating that the Earth had warmed 0.7 degree Celsius since 1957, with man-caused warming contributing 0.6 degree C. He summarized: "I believe that some of the most worrisome biases are less of a problem than I had previously thought."

Perry Officials Censored Climate Change Report

The Texas Commission on Environmental Quality doesn't want you to know that climate change is causing sea level rise in Galveston Bay. Rick Perry takes Texas pride in being a climate change denier—and his administration acts accordingly. Top environmental officials under Perry have gutted a recent report on sea level rise in Galveston Bay, removing all mentions of climate change. For the past decade, the Texas Commission on Environmental Quality (TCEQ), which is run by Perry political appointees, including famed global warming denier [Bryan Shaw](#), has contracted with the Houston Advanced Research Center to produce regular reports on the state of the Bay. But when HARC submitted its most recent *State of the Bay* publication to the commission earlier this year, officials decided they couldn't accept a report that said climate change is caused by human activity and is causing the sea level to rise. Top officials at the commission proceeded to edit the paper to censor its references to human-induced climate change or future projections on how much the bay will rise.

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5- RENEWABLES and RELATED

Solar Panels Start to Outshine Mirrors

Factories in China have been churning out solar panels so fast that prices have plunged. Just ask the folks at Solyndra, the bankrupt photovoltaic-cell maker that has gotten the Obama Administration into hot water over loan guarantees. Those Chinese manufacturers are now disrupting another corner of the solar industry: so-called solar thermal installations, which make electricity by bouncing sunlight off mirrors to boil water, creating steam that drives turbines.

At least four companies have abandoned plans for solar thermal plants in the U.S. in favor of electricity-producing solar cells, which have fallen in price by nearly half this year, according to Bloomberg New Energy Finance. That means it may no longer make sense to complete many solar thermal projects, typically vast installations in deserts that take years to build. For solar thermal, "the future in the U.S. looks very challenging," says Brett Prior, an analyst at energy consultancy GTM Research.

Critical minerals for clean energy future ignite geopolitical storm (October 11, 2011) -- The clean energy economy of the future hinges on a lot of things, chief among them the availability of the scores of rare earth minerals and other elements used to make everything from photovoltaic panels and cellphone displays to the permanent magnets in cutting edge new wind generators. And right out of the gate trouble is brewing over projected growth in

demand for these minerals and the security of their supplies. ... > [full story](#)

[Does converting cow manure to electricity pay off? Successful renewable energy project in Vermont](#) (October 13, 2011) -- Researchers in Vermont confirm that it is technically feasible to convert cow manure to electricity on farms, but the economic returns depend highly on the base electricity price; the premium paid for converted energy; financial supports from government and other agencies; and the ability to sell byproducts of the methane generation. ... > [full story](#)

[New Saudi Arabias of solar energy: Himalaya Mountains, Andes, Antarctica](#) (October 13, 2011) -- Mention prime geography for generation of solar energy, and people tend to think of hot deserts. But a new study concludes that some of the world's coldest landscapes -- including the Himalaya Mountains, the Andes, and even Antarctica -- could become Saudi Arabias of solar. ... > [full story](#)

[Tougher, lighter wind turbine blade developed: Polyurethane reinforced with carbon nanotubes](#) (October 9, 2011) -- Efforts to build larger wind turbines able to capture more energy from the air are stymied by the weight of blades. Researchers have now built a prototype blade that is substantially lighter and eight times tougher and more durable than currently used blade materials. ... > [full story](#)

[First displaced tortoise released](#) Riverside Press-Enterprise, 10/8/11)

A biologist captured this desert tortoise in May so she wouldn't be crushed by the heavy machinery now building a 5.6-square-mile solar energy project in a Mojave Desert valley in northeastern San Bernardino County. Yet she never adapted to captivity. Again and again, she attempted to climb her pen's wire mesh fence, only to fall onto her back. So, with special permission from the U.S. Fish and Wildlife Service, she was returned to the wild last week -- the first and only desert tortoise to be relocated since the Obama administration approved six large-scale solar projects for public desert lands in Riverside and San Bernardino counties. Another 127 tortoises displaced by the BrightSource Energy Co. project must remain in pens for the winter, even though federal Bureau Land Management and company officials had expected to release many of them this fall.



[Draft environmental study for proposed Walker Ridge wind project postponed](#) Lake County News, 10/9/11

The release of a draft environmental impact statement for the proposed Walker Ridge Wind Project in Lake and Colusa counties has been postponed until 2012. The delay will allow the project proponent, AltaGas Renewable Energy Pacific Inc., time to complete a revised plan of development, according to a statement from the Bureau of Land Management.

[Electricity from the nose: Engineers make power from human respiration](#) (October 8, 2011) -- The same piezoelectric effect that ignites your gas grill with the push of a button could one day power sensors in your body via the respiration in your nose. ... > [full story](#)



Solar and Wind Could Power the West Right Now, All of America in 2026

Posted: 11 Oct 2011 08:17 AM PDT

by John Farrell, in two posts that came from [Energy Self-Reliant States](#)

The Germans have installed over 10,000 megawatts of solar panels in the past two years, enough to power 2 million American homes (or most of Los Angeles, CA). If Americans installed local solar at the same torrid pace, we could already power most of the Mountain West, could have a 100 percent solar nation by 2026, while enriching thousands of local communities with new development and jobs. The following map [above] shows what could have happened had the U.S. kept pace with Germany on solar power in the past two years (installed the same megawatts on a per capita basis). Sunshine could power 10 states! The spread of solar has also been in harmony with environmental goals. Rather than covering natural areas or fertile land with solar panels, [80 percent of the solar installed in Germany was on rooftops](#) and built to a local scale (100 kilowatts or smaller – the roof of a church or a Home Depot store). Solar in the U.S. also can use existing space. The following map shows the amount of a state's electricity that could come from rooftop solar alone, from our 2009 report [Energy Self-Reliant States](#):.....

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6- RESOURCES

SF Bay: State of the Estuary Over 700 participants attended the State of the San Francisco Estuary Conference on September 20-21, 2011. All of the abstracts are on-line. We are working to get videos of some of the plenary presentations and PDF's of some of the other presentations posted in November.

Conference Web Site <http://www.sfestuary.org/soe2011/>

- **New Book Available (The book was on display at the SOE Conference)** The Natural History of San Francisco Bay, by Ariel Rubissow Okamoto and Kathleen Wong. It covers hydrodynamics, climate, species, human history, environmental challenges and restoration frontiers, up and down the watershed, all in 300 pages. <http://www.bayariel.com/ARO-baybook.html>
- **California Water Policy Conference, March 8-9, 2012, Los Angeles, CA** The agenda full agenda for this event will be posted in a few weeks. Student scholarships will be available. Please see the web site for more information. <http://www.cawaterpolicy.org/>

Introduction to Holistic Planned Grazing

Oct 13 & 14, 2011 San Luis Obispo, Calif.

California Rangeland Conservation Coalition partner, the California Native Grasslands Association is hosting a course on Introduction to Holistic Planned Grazing. This 1-1/2 day classroom & field workshop for ranchers, land managers, and especially those looking to create a new grazing program on public lands! There is an offer of a special price for past attendees of any CNGA Sustainable Grazing workshop who want a refresher. All are welcome! [For more information and to register click here.](#)

SAVE THE DATE! May 3-6, 2012: Grasslands of the California North Bay. A 2-day symposium combining presentations, field trips, and workshops, with optional May 5-6 workshops & field trips. Locations: Pepperwood Preserve, Santa Rosa, & a coastal grasslands venue (details forthcoming). Watch here for more details in the coming months.

The Oregon Department of Fish and Wildlife, The Wetlands Conservancy, and Defenders of Wildlife invite you to join us for a workshop on **climate and landscape change in Oregon's northern basin and range ecosystems**. The event will be held **October 18th** in Burns and will focus on sagebrush and closed-basin wetland habitats. The goal of the workshop is to contribute to the update and implementation of the Oregon Conservation Strategy by describing the impacts of climate and other landscape-scale changes on these habitats and identifying management strategies that are most likely to be successful under future conditions. More details can be found in the draft agenda attached. **Please RSVP by October 7th** at the latest to Sara O'Brien at sobrien@defenders.org. Space is limited to 30 participants.

MAKE A DIFFERENCE DAY AT THE SAN JOAQUIN RIVER NWR

Join River Partners, Saturday, October 22, for our tree planting event.

River Partners is calling for volunteers to help plant 500 trees and shrubs on the San Joaquin River National Wildlife Refuge, on Saturday, October 22 from 9:30 am to 12:00 pm, in celebration of *Make a Difference Day*. Several Modesto Schools have grown plants for River Partners over the last year. For the "planting" phase of this school project, River Partners is asking for help from area residents and students. Volunteers will install oaks, golden currents, and other native plants, working to restore an important wildlife area along the San Joaquin River and the Pacific Flyway. These efforts will improve water quality and wildlife habitat for the region and contribute to the largest habitat restoration initiative in California – the San Joaquin River National Wildlife Refuge. If you'd like to join us for *Make a Difference Day* at the San Joaquin River NWR, please contact us at (530) 894-5401 x 222.

Siting & Permitting Renewable Energy Projects in the West

December 7-9, 2011 · Rancho Bernardo Inn · San Diego, CA Registration Code SP1E11
Register Now for **Siting & Permitting Renewable Energy Projects in the West from December 7-9, 2011** at the Rancho Bernardo Inn in San Diego, CA. The event will allow you to meet a cross-section of key regulators from multiple agencies, developers seeking to get projects up and running and a variety of other stakeholders to exchange the information and practical strategies needed to hit the ground running and bring projects to completion in a timely fashion. Register by Friday, November 4, 2011 to

receive the Early Bird Special!

7- OTHER NEWS OF INTEREST

[Across the Atlantic on flotsam: New fossil findings shed light on the origins of the mysterious bird Hoatzin](#) (October 9, 2011) -- Scientists have examined fossil relatives of the South American Hoatzin (*Opisthocomus hoazin*), which point to African origins for the enigmatic bird. ... > [full story](#)



[Giant 'kraken' lair discovered: Cunning sea monster that preyed on ichthyosaurs](#) (October 10, 2011) - Long before whales, the oceans of Earth were roamed by a very different kind of air-breathing leviathan. Snaggle-toothed ichthyosaurs larger than school buses swam at the top of the Triassic Period ocean food chain, or so it seemed before paleontologist Mark McMenamin took a look at some of their remains in Nevada. Now he thinks there was an even larger and more cunning sea monster that preyed on ichthyosaurs: a 'kraken' of such mythological proportions it would have sent Captain Nemo running for dry land. ... > [full story](#)

[New center for bird-watching at convergence of Mississippi, Missouri rivers](#) The Republic - October 9, 2011 ST. LOUIS - The latest effort to promote nature tourism in the area where the Mississippi and Missouri rivers converge is a \$3.3 million bird-watching center.Now, the Audubon Center at Riverlands will open next week at West Alton, about a half-hour north of St. Louis. Officials at the center say the economic benefits to the region could be significant. They cite a 2006 U.S. Fish and Wildlife Survey in which 48 million Americans identified themselves as bird-watchers. They generate \$36 billion in spending. The survey indicated that 20 million of them say they will travel to view birds

[Bird-watching hits the Big Screen](#) San Jose Mercury News – October 11, 2011

On Friday, "The Big Year," opens in theaters nationwide, putting a popular culture lens on birds for the first time since Alfred Hitchcock's 1963 horror film featuring crazed gulls, sparrows and crows besieging townspeople in Northern California.

OPINION | October 12, 2011

[Op-Ed Columnist: Something's Happening Here](#)

By THOMAS L. FRIEDMAN

What's behind all the social protests erupting from Tunisia to Wall Street? Some call it The Great Disruption. Others call it The Big Shift. You decide.



Health benefits of broccoli require the whole food, not supplements (October 11, 2011) -- New research has found that if you want some of the many health benefits associated with eating broccoli or other cruciferous vegetables, you need to eat the real thing -- a key phytochemical in these vegetables is poorly absorbed and of far less value if taken as a supplement. ... > [full story](#)

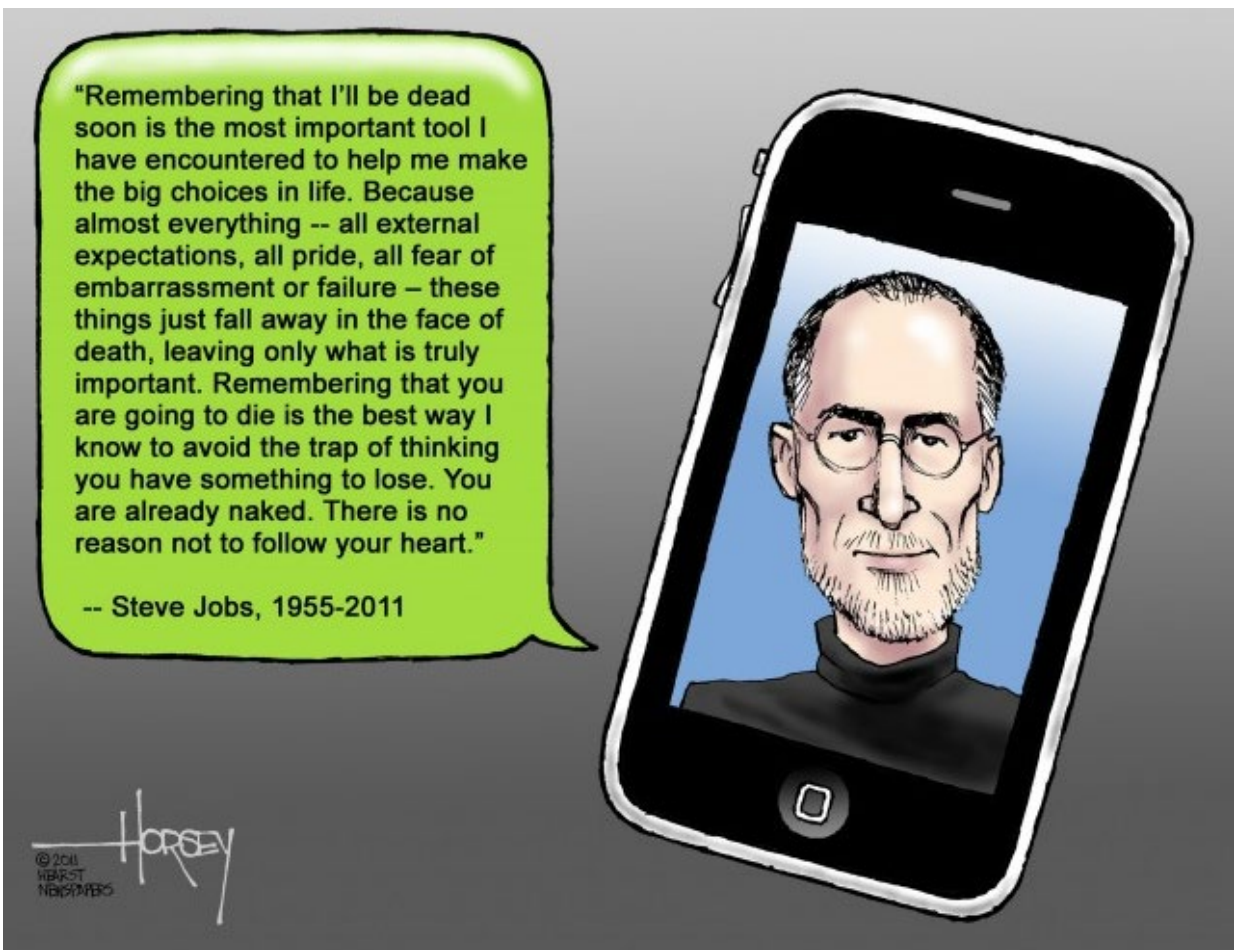
Certain dietary supplements associated with increased risk of death in older women, study suggests (October 11, 2011) -- Consuming dietary supplements, including multivitamins, folic acid, iron and copper, among others, appears to be associated with an increased risk of death in older women, according to a new report. ... > [full story](#)

8- IMAGES OF THE WEEK









Ellie Cohen, President and CEO

PRBO Conservation Science

3820 Cypress Drive, Suite 11

Petaluma, CA 94954

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707-781-2555, ext. 318

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