Environment & Climate News

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Texas Curtails Runaway Asbestos Litigation
by James M. Taylor
The state of Texas stands to lose its status as the asbestos litigation capital of the country, thanks to newly enacted legislation setting strict medical criteria for claims of asbestos-related personal injury.

Speculative Claims Barred
The new law, signed by Gov. Rick Perry (R) on May 19, will allow compensation only for people who have been diagnosed as having asbestos-related personal injury.

FBI: Eco Extremists Are Top Domestic Terror Threat
by James M. Taylor
Extremist environmental activist groups are the nation's top domestic terrorism threat, John Lewis of the Federal Bureau of Investigation told a Senate committee on May 18.

Washington State Enacts Green Building Mandates
by Todd Myers
Washington Gov. Christine Gregoire (D) on April 8 signed a law requiring all publicly funded buildings exceeding 5,000 square feet—such as colleges, offices, prisons, and schools—to meet stringent “green building” standards.

Florida Adopts New Standards for Endangered Species Listings
International standards trump subjective reckoning
by James A. Hoare
The Florida Fish and Wildlife Conservation Commission (FWCC) has approved new standards for identifying and protecting species in the state.

Objective Criteria Favored
On April 14 the FWCC jettisoned the state’s preexisting means for designating species as being “of special concern,” “threatened,” or “endangered,” in favor of international standards that rely on objective data instead of emotional public relations campaigns.

Under the new standards, a species will be listed as “endangered” if it is expected to lose 80 percent of its population within 10 years, is confined to 40 square miles, or has 250 or fewer mature individuals. A species will be listed as “threatened” or “of special concern” if it is imperiled but to a lesser extent.

The new standards apply solely to applications of the Florida Endangered Species Act of 1976 and do not affect the federal Endangered Species Act. The new standards consider Florida populations of species only.

The standards closely mirror those of the International Union for the Conservation of Nature (IUCN), an organization founded “to influence, encourage, and assist societies throughout the world to conserve the integrity and diversity of nature and to ensure that any use of nat-
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Great Lakes Getting Cleaner, EPA Reports

by G. Tracy Mehan III

The U.S. Environmental Protection Agency (EPA) and Environment Canada have announced good news about North America’s environment.

The 2004 Annual Progress Report on the Great Lakes Binational Toxics Strategy, released in June 2005, documents progress in dealing with a particularly nasty suite of persistent, toxic chemicals that accumulate in the environment with increasing concentration up the food web. These are pollutants of national and international concern, as they have pronounced effects on the biota and fisheries of the Great Lakes and the people who rely on them, because of the size of the lakes and the longer residence time of the contaminants in such huge bodies of water.

“The 2004 Annual Progress Report on the Great Lakes Binational Toxics Strategy ... documents progress in dealing with ... persistent, toxic chemicals that accumulate in the environment with increasing concentration up the food web.”

Ambitious Goals Being Met

The strategy was the result of a 1997 agreement between the U.S. and Canada “to virtually eliminate toxic substances” from the Great Lakes to meet previous commitments under their Great Lakes Water Quality Agreement. Success is within reach with respect to priority pollutants such as mercury. PCBs, dioxins/furans (furans are a colorless, volatile liquid compound similar to dioxin), and hexachlorobenzene (HCB), the report shows. Using “Great Lakes” in the title is somewhat confusing since the goals for both countries are mostly national in scope. But these waters are major receptors of the pollutants addressed in the strategy. Many of these pollutants travel great distances in the air. Some, such as mercury, cycle globally. Nevertheless, the 2004 report gives us a snapshot of tremendous progress that extends well beyond the Great Lakes region.

Of the 17 reduction goals set forth for the top 12 toxic substances (“Level 1”) back in 1997, “ten have been met, three will be met by the target time line date of 2006, and the remaining four will be well advanced toward meeting the targets by 2006,” the report states.

Big Mercury Reductions Achieved

Regarding mercury, the subject of much debate in Washington these days, the report notes the U.S. has met its national mercury use reduction goal of 50 percent, and currently has reduced use by more than 50 percent based on a 1990 baseline. Mercury is now out of batteries, paints, high school labs, some illuminated tennis shoes, and other products. In the mid-1990s, Gov. John Engler of Michigan worked with the Big Three auto companies to phase out the 9.8 metric tons of mercury used in convenience light switches under hoods and trunks annually.

The chlor-alkali industry accounted for almost 35 percent of U.S. mercury use in 1995, and the industry’s total mercury use decreased 76 percent from regulatory mandates under the Clean Air Act amendments of 1990. New reductions to be achieved from regulation of the power industry pursuant to the new Clean Air Mercury Rule will eventually cut those mercury emissions by nearly a further 70 percent.

Other Pollution Sources Slashed

The 2004 Annual Progress Report recognizes tremendous progress by the U.S. and Canada in reducing emissions of dioxins and furans. The U.S. projected a 92 percent reduction in nationwide releases of these pollutants by the end of 2004 (the actual figures for the year have yet to be tabulated and released) against a goal of 75 percent by 2006. Canada stands at 84 percent and expects to meet its 2000 target of 90 percent by 2005.

PCBs, second only to mercury as a cause of fish consumption advisories nationally, are also a top priority of the Binational Toxics Strategy. PCBs were banned by law many years ago, but they were still in use at the time the strategy was conceived. In the United States approximately 87,000 transformers and 143,000 capacitors containing PCBs were disposed of between the 1994 baseline and the end of 2002. This represents reductions of 43.5 percent and 10 percent respectively.

G. Tracy Mehan III was assistant administrator for water at the Environmental Protection Agency and director of the Michigan Office of the Great Lakes, serving in the cabinet of Gov. John Engler. He is a consultant with the Cadmus Group, Inc., an environmental consulting firm. This article first appeared on National Review Online, http://www.nationalreview.com

INTERNET INFO

Energy Bill Wins Senate Committee Approval

Prospects uncertain before full Senate, reconciliation with House

by James Hoare

Comprehensive federal energy legislation gained significant momentum on May 26 as the Senate Energy and Natural Resources Committee overwhelmingly approved, by a vote of 21-1, a proposed energy bill.

The bill’s ultimate fate remains uncertain, however, as compromises and changes made to satisfy committee members may generate opposition in the full Senate. Moreover, the bill would also require contentious reconciliation with a competing bill already approved by the House of Representatives.

The Senate bill contains a patchwork of provisions designed to encourage efficient energy production and assist in energy conservation. With provisions ranging from new subsidies and tax breaks for renewable energy companies to mandatory increases in the production and sale of ethanol, tax breaks for consumer energy efficiency, and the removal of obstacles for fossil fuel development, the bill has generated mixed emotions among most Senators. Nevertheless, bipartisan momentum for the bill appeared to gain as this story went to press.

Bill Wins Bipartisan Support

Louisiana Democrat Mary Landrieu, who supports the bill, won approval for a provision authorizing the federal government to inventory the oil and gas deposits believed to exist in the Outer Continental Shelf, where natural resource recovery is currently prohibited.

“The current version is frighteningly like the California deregulation bill of 1996, in that there’s something for everyone, but the pieces cannot fit with each other. It is as if all of the stakeholders came to the table with one piece of their favorite jigsaw puzzle.”

Tom Tanton
INSTITUTE FOR ENERGY RESEARCH

“[T]hese ‘energy bills’ continue to be a collection of special interest provisions cobbled together from offerings by Washington-based trade associations, lobbyists, and so-called ‘environmental’ nonprofit groups funded by DOE, EPA, and their contractors.”

GLENN SCHLEEDE
ENERGY MARKET CONSULTANT

“[T]his is about fuel in our farm fields, not under the sands of the Saudis or Kuwaitis,” countered Feinstein’s fellow Democrat, Senator Byron Dorgan of North Dakota.

Many free-market economists also found fault with provisions of the bill. “The current version is frighteningly like the California deregulation bill of 1996, in that there’s something for everyone, but the pieces cannot fit with each other,” noted Tom Tanton, senior fellow with the Energy Research. “It is as if all of the stakeholders came to the table with one piece of their favorite jigsaw puzzle.”

“The House-passed ‘energy bill,’ the bill reported out by Senate Energy, and the ‘energy tax’ provisions—including a lot of special interest tax credits—are bad news for the national and public interest,” energy market consultant Glenn Schleede said.

“As nearly as I can tell,” noted Schleede, “these ‘energy bills’ continue to be a collection of special interest provisions cobbled together from offerings by Washington-based trade associations, lobbyists, and so-called ‘environmental’ nonprofit groups funded by DOE, EPA, and their contractors. There may be a few provisions that are truly in the national and public interest, but these are overshadowed by special interest provisions.”

“The best thing to hope for is that these bills will end up so loaded down with bad ideas that they will fail someplace on the way toward passage,” Schleede said.

Others Give Support

Despite the hostility toward some specific provisions of the bill, the bill’s prospects were buoyed by support from such diverse groups as the American Council for an Energy-Efficient Economy (ACEEE) and the National Association of Manufacturers (NAM).

“We commend the Energy Committee for adding many useful energy efficiency sections to this bill,” commented ACEEE Executive Director Steven Nadel in a May 23 media statement.

As this story went to press, the NAM was preparing to release a study showing nearly 2 million jobs could be lost if the Senate does not pass the energy bill. The report promises state-by-state statistics regarding energy prices, job creation, and economic growth dependent on the bill.

James Hoare (jhoare@mcgivneyandkluger.com) is managing attorney at the Syracuse, New York office of McGivney, Kluger & Gannon.
Radium Standards Too Strict in Illinois, State Agency Says

Agency concedes rules provide no health benefit by James M. Taylor

Citing updated scientific information, the Illinois Pollution Control Board has proposed loosening the state's acceptable limit for radium in surface water.

Since 1973, Illinois has limited radium to 1 picocurie of radium-226 per liter of surface water and 3.75 picocurie of radium-228 per liter of surface water. Both radium standards are far more stringent than the U.S. Environmental Protection Agency's (EPA) 5 picocurie per liter limit for radium in surface water. Both forms of radium.

However, radium exists at greater levels in deep bedrock aquifers, where it collects after settling. When water is drawn from deep water wells, the radium enters the surface environment through wastewater systems.

Science Validates New Standard

While vowing to vigorously protect the environment and public health from excessive radium, the Illinois Pollution Control Board conceded science has vindicated the U.S. EPA's 5 picocurie standard.

“Any time a state looks at a program that is supposed to be protective of human health, the science is going to be overstripped by human threat,” said Burnett. “This is one of those instances where government has devoted scarce resources, you have got to shout, ‘hallelujah,’” Burnett said. “This is one of those instances where government has seen the light, and overcome fear mongering and propaganda campaigns. That is really rare.”

James M. Taylor (taylor@heartland.org) is managing editor of Environment & Climate News.

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Asbestos

Continued from page 1

nosed with asbestos-related illnesses. The measures prevent people who have shown no signs of injury from suing for speculative future health effects. In exchange, the bill extends the pre-existing two-year time limit between asbestos exposure and the initiation of litigation that fueled many of the speculative future-injury claims. Florida, Georgia, and Ohio enacted similar bills earlier this year.

“Asbestos reform must be about victims first and a system based on medical criteria, instead of an arbitrarily determined piggy bank of cash. That is the only way to ensure that the truly sick receive their day in court.”

KRISTIN ARMSHAW
CIVIL JUSTICE TASK FORCE
AMERICAN LEGISLATIVE EXCHANGE COUNCIL

State Was Lawsuit Magnet
Texas had become a magnet for speculative health claims. As noted in the May 23 Insurance Journal, “Texas has become the national haven for questionable and frivolous asbestos lawsuits. An estimated 40 percent of all of the nation’s asbestos claims are filed in Texas courts, although a vast number of these lawsuits have little, if any, connection to Texas. In many cases workers from all over the country have been encouraged to file in Texas rather than in their home states with the hope that Texas courts would give bigger awards.”

The new law “will have a dramatic impact” on spurious legal claims, Dick Trabulsi of Texans for Lawsuit Reform told the April 25 Dallas Morning News. “Between two-thirds and 95 percent of claims in asbestos litigation are on behalf of people showing no impairment,” he noted.

Kristin Armshaw, director of the Civil Justice Task Force at the American Legislative Exchange Council, said, “For years, profiteering trial lawyers have paraded before the courts, by requiring that persons first be diagnosed with asbestos or silica-related impairments. A person must prove that they have an asbestos or silica-related injury before they file a civil action to get compensated.”

“Texas has become the national haven for questionable and frivolous asbestos lawsuits. An estimated 40 percent of all of the nation’s asbestos claims are filed in Texas courts, although a vast number of these lawsuits have little, if any, connection to Texas.”

INSURANCE JOURNAL

Fighting Ambulance Chasers
Business owner Greg Scofelia of Galveston illustrated the problems with the old system, according to the May 19 Houston Chronicle. According to the Chronicle, Scofelia’s auto parts company has been sued more than 30 times for selling auto parts manufactured with asbestos. All of the lawsuits were determined to be without merit, but the legal costs were daunting, even though Scofelia prevailed in each one.

“Most of the lawsuits were from people just chasing money,” Scofelia told the Chronicle. “I was scared because once my liability insurance ran out, they could go after me and my business.”

“Asbestos reform must be about victims first and a system based on medical criteria, instead of an arbitrarily determined piggy bank of cash. That is the only way to ensure that the truly sick receive their day in court,” Armshaw said.
Asbestos litigation that has sent more than 70 corporations into bankruptcy and has clogged the courts with more than 700,000 civil claims would be a thing of the past under a bill approved on May 26 by the U.S. Senate Judiciary Committee in a 13-5 vote.

Under the proposed legislation, a $140 billion trust fund paid for by insurance companies and asbestos-related industries would compensate victims based on their degree of physical impairment. Payments would range from $25,000 for minor breathing impairments to $11 million for lung cancer. Attorneys fees would be capped at 5 percent of the total award.

Majority of Money Bypasses Victims

According to a May 2005 study released by the RAND Institute for Civil Justice, more than 740,000 people have filed asbestos claims in the United States, and many more cases likely will be filed in the future. According to the study, the courts are finding it difficult to keep up with the cases.

Moreover, reported the RAND study, asbestos victims received only 42 cents of every dollar spent on asbestos litigation. Plaintiffs' lawyers receive 27 cents, and defense costs account for the remaining 33 cents.

The bill was cosponsored by Patrick Leahy (D-Vermont) and Arlen Specter (R-Pennsylvania). It has attract both support and opposition from both sides of the aisle. Several liberal Democrats, including Russ Feingold of Wisconsin, Edward Kennedy of Massachusetts, Charles Schumer of New York, and Richard Durbin of Illinois, oppose the measure because it moves asbestos-related claims out of the courts. The four would prefer to allow even persons with no identifiable asbestos-related injuries to file civil lawsuits.

On the other side of the aisle, many conservative Republicans consider the $140 billion compensation pool too large. Some senators from both parties, moreover, support the idea of a compensation pool but oppose some of the logistics of this particular plan.

“We have always realized that passing a bill of this scope and complexity is the legislative equivalent of steering a ship through a minefield during a hurricane,” said Orrin Hatch (R-Utah), according to CBS News, “but there’s still going to have to be a lot of work in it.”

“Everybody wants a little more, but the final vote will turn on whether the bill is better than the current system,” CBS News reported Specter as saying.

Analysts Praise Bill

“In approving the asbestos trust fund legislation, the Senate Judiciary Committee has taken a huge step towards injecting sanity and justice into the process of compensating asbestos victims,” said Ken Boehm, chairman of the National Legal and Policy Center.

“If lawmakers ... want to reduce the gigantic backlog of specious asbestos lawsuits that clog our courts and delay justice for the victims who are truly sick, then they should move this bill without further delay.”

JOHN ENGLER
NATIONAL ASSOCIATION OF MANUFACTURERS

“If passed by Congress, this legislation would end the circus of runaway asbestos litigation that has amply rewarded a handful of lawyers while leaving thousands of desperately sick people with a fraction of the compensation they deserve,” added Boehm. “It is nothing short of a national scandal that unscrupulous lawyers have clogged the courts with over 730,000 asbestos claims, 90 percent of them on behalf of claimants who have no asbestos-related health problems. Meanwhile, justice is delayed and denied for truly ill people, some of whom have died waiting for their day in court.”

“The NAM [National Association of Manufacturers] urges Senate leadership to advance this bill expeditiously toward floor debate and a final vote,” said NAM President John Engler in a May 26 news release. “For the sake of our economy, and in the spirit of compromise, special interests must now yield to our shared national interest.”

Engler continued, “If lawmakers want to be taken seriously by manufacturers and their employees when professing their desire to spur economic growth, and if they want to reduce the gigantic backlog of specious asbestos lawsuits that clog our courts and delay justice for the victims who are truly sick, then they should move this bill without further delay.”

Trial LawyersObject

“This bill is about as far from perfect as you can get,” Todd Smith, president of the American Trial Lawyers Association, told the May 27 Washington Times. “It’s underfunded, unfair, unworkable, and likely unconstitutional.”

“People should not be able to sue based on mere speculative future harm that may never occur,” countered Sterling Burnett, a senior fellow at the National Center for Policy Analysis. “You have to actually show that somebody caused you harm. The tradeoff regarding limitations is rational and a good thing.

“A car might hit me crossing the street tomorrow,” he continued. “But I can’t sue auto manufacturers or fellow drivers based on such mere speculation.”

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INTERNET INFO


MOVING BEYOND CONFLICT:
Private Stewardship and Conservative Partnerships

By: Assistant Secretary of the Interior
Lynn Scarlett

Ms. Scarlett’s Three Challenges to Improve the Environment:

• Better metrics: “If we are going to focus on results, we need to be able to define and measure them.”
• Erase confrontational interactions: “We need to reintroduce the art of conversation, the art of mediation and negotiation.”
• Devise new methods of governance: “This does not necessarily mean repudiating all the structure that has been put in place. Rather, it requires seeking additional tools.”

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Minnesota Team Abandons Effort to “Prove” Global Warming

by Jay Lehr, Ph.D.

In early May, newspapers across the country reported that a team of “adventurers” from Minnesota was setting off to “document climate change” at the North Pole.

According to newspaper reports, their aim was to “draw attention to the gradual warming of Earth’s climate” and “convince skeptics, especially in the Bush administration, that global warming is real.”

The expedition lasted less than a month, as the adventurers discovered global warming may not be as real or as pervasive as they thought. Reported the June 4 Minneapolis Star-Tribune, “Amid a stretch of extraordinarily heavy snowfall, strong winds and broken and shifting ice, the two men from Grand Marais, Minn., abandoned their expedition Thursday [June 2] after advancing only 45 miles in 24 days.

In abandoning their expedition, the Minnesota duo have spared the world a barrage of misinformation by non-scientists who make casual observations and then claim they know what caused the situations they are observing.

No Melting Trend

A few years ago, R.J. Braithwaite’s peer-reviewed article in Progress in Physical Geography described a “mass balance analysis” he conducted of 246 glaciers sampled all around the world between 1946 and 1995. That’s 50 years of data. Braithwaite found some glaciers were melting, while a nearly equal number were growing in size, and still others remained stable.

He concluded, “There is no obvious common or global trend of increasing glacier melt in recent years.”

But if your goal is to frighten the public into thinking humans are causing global warming with potentially catastrophic consequences, there is no shortage of melting glaciers to report on. By some estimates, 160,000 glaciers exist on Earth. Only 63,000 have been inventoried, and only a few hundred have been studied in the detail described by Braithwaite.

Scaremongers Ignore Facts

For example, a favorite melting glacier of the global warming activists sits atop Mt. Kilimanjaro in northern Tanzania, near the equator. The glacier is indeed receding, but satellites have been measuring temperatures near its summit for more than 25 years and have found no warming at all. Nonetheless, the global warming activists frequently trot out Kilimanjaro as a poster child for their cause.

A scientific study published in Nature in November 2003 explained that deforestation of the mountain slopes—not overall warming—is what is causing the melting of the glacier. But the scaremongers don’t particularly care why Kilimanjaro is melting, only that it is. Any other facts get in the way of their lobbying and fund-raising efforts.

The scaremongers also point out as many as seven ice shelves have broken off the Antarctic continent over the past 50 years. They blame global warming, ignoring the inconvenient evidence that the continent is actually cooling dramatically. Between 1986 and 2002, Antarctica cooled by 0.7 degrees Celsius per decade. There also has been a statistically significant increase in sea ice area, as well as an increase in the length of the sea ice season, since 1990.

Facts Overcome Fears

Sea ice plays a key role in regulating the surface exchange of heat, moisture, and salt between the Earth’s atmosphere and the oceans. It is a high-latitude phenomenon found only in the Arctic Ocean and in the oceans around Antarctica. The local amount changes with the season, but at any given time, sea ice worldwide covers an area larger than the North American continent.

In the Arctic Ocean, floating sea ice (as opposed to ice shelves, which generally remain attached to the glacier that produced them) covers on average 14 million to 16 million square kilometers in late winter and 7 million to 9 million square kilometers at the end of summer. In Antarctica, sea ice covers from 17 million to 20 million square kilometers in late winter; only about 3 million to 4 million square kilometers remains at the end of summer.

The seasonal sea ice cycle is a natural phenomenon that affects biological habitats and human activities alike. It’s important that scientists study and understand the cycle, which is affected a lot more by the sun and the Earth’s orbit around it than by human activities.

Given the great seasonal variations in sea ice, it’s pretty easy to grab a few short-term observations of changes in sea ice or glaciers and allege catastrophic global warming is taking place. As the Minnesota duo discovered, however, the facts strongly contradict those frightening conclusions. It’s high time the scaremongers and their allies in the media be required to face up to them.

Jay Lehr, Ph.D. (lehr@heartland.org) is science director for The Heartland Institute.

Correction

In the May issue of Environment & Climate News, we illustrated the article “House Approves Energy Bill … Again” with a photo of Rob Bradley. Unfortunately, we pictured the wrong Rob Bradley. We apologize and run here a proper photo of Mr. Bradley, who is president of the Institute for Energy Research.
Recent Global Warming Is Natural, Benefits Humans

by Sallie Baliunas

The current ice age, called the Pleistocene, became severe approximately two million years ago.

One trait of the ice age is its pattern of glacial and interglacial periods, the harsh and cold glacial period persisting roughly 100,000 years, followed by a moderate interglacial period lasting only approximately 10,000 to 15,000 years.

Around 10,000 years ago, the cold abated and marked the onset of the present interglacial period, called the Holocene, as massive ice sheets at middle to high latitudes shrank, subsequently raising sea levels and inundating the extended, continental boundaries previously defined by the glacial conditions.

The next glacial is expected to begin within several millennia.

"The solution to weather catastrophes ... is not to implement ineffective policies out of a vague concept of precaution, but to strive for scientific facts."

Warming Predictions Unrealistic

Discussions on enacting caps like the Kyoto Protocol on carbon dioxide emissions arise from forecasts by computer simulations of climate conditions centuries in the future. Simulations contain substantive uncertainties and unknowns and are essential scholarly tools; they cannot accurately reproduce major features of climate.

Indeed, measurements and analyses of relevant climate parameters suggest so far a much smaller enhanced greenhouse effect than the computer simulations do.

While there was a warming trend in the last decades of the early twentieth century, coinciding with and possibly caused at least in part by the enhanced greenhouse effect, there was a prior warming trend of equal magnitude early in the twentieth century apparently not primarily caused by the enhanced greenhouse effect.

If the recent warming trend, observed to be roughly 0.15-0.17°C per decade, is assumed to be caused entirely by the enhanced greenhouse effect, it is somewhat lower than projections from most computer simulations, indicating the forecasts are still uncertain.

Baseline May Be Wrong

Regarding natural climate variability, it should be noted that the nineteenth century was the end of a well-documented, centuries-long cold period in many areas of the world. Hence, the period of unusual cold at the start of the instrumental record may bias the casual observer to believe the second half of the nineteenth century displayed "normal" temperature, and the twentieth century is "abnormal" in warmth.

One insightful test of estimates of the enhanced greenhouse effect comes from predictions made by the computer simulations of air temperature just above the surface. Simulations forecast increased temperature from the surface to a height of several kilometers (km) (http://arxiv.org/abs/physics/0407074 and http://arxiv.org/pdf/physics/0407075). The air at those altitudes should already display an accelerated warming trend with respect to the surface if simulations of the enhanced greenhouse effect are correct (http://blue.atmos.colostate.edu/publications/pdf/R-271.pdf).

Measurements from weather balloons since the 1950s and NOAA satellites beginning in 1978 have yielded an independently validated record of temperature integrated over the layer from the surface and rising to approximately 5 km, or the troposphere. (See Figure 1.)

A linear trend fitted through the record, +0.077°C per decade, is smaller than that at the surface, in contradiction to the climate simulations of the enhanced greenhouse effect. It suggests the incomplete simulations are predicting overly high warming trends, both for recently past and future decades.

Recent Warming Providing Stability

Is the twentieth century's climate unusual? This perspective from ice core information covers the last 17,000 years and pertains to Greenland (see Figure 2), although features of the record are present in other regions.

The record begins around the time of the coldest recent period of the glacial. During the termination of the glacial period, temperatures fluctuated sharply, and the physical details of causal factors and climate responses are poorly known.

Response by humans and ecosystems to the retreat of the glacial period and onset of a more stable and warm climate was swift. With the development of agriculture, human civilization expanded and sculpted extensive, artificial landscapes.

Compared to so great a change of the glacial termination, the last one thousand years look fairly calm. But significant fluctuations in local conditions did occur, driving notable ecosystem and human responses.

Humans Struggle in Cooler World

A broad period of equable climate reached parts of Western Europe as early as the ninth century C.E. and persisted in some areas though the twelfth century. Peoples in Western Europe could grow familiar crops at more northerly latitudes or higher altitudes than had been possible in prior centuries.

By the twelfth to thirteenth centuries, a series of harsher periods set in, some appearing seemingly abruptly. Economies had benefited from agriculture and sea trade; the onset of the climate deterioration eroded economies and shocked cultures. Called the Little Ice Age, it persisted in areas of Western Europe into the nineteenth century.

Life expectancy in England, which had gained approximately 10 years during the Medieval Warm Period, fell back to roughly 38 years, according to climatologist Hubert Lamb, by the mid-fourteenth century.

Unusual weather calamities continued to strike in the fourteenth and fifteenth centuries. One diarist noted that in Smolensk (Central Europe) in 1438 the starvation was so bad "the wild animals ate people and people ate people and small children." Survival meant cannibalism.

Recent Climate Unexceptional

In terms of extreme weather, the twentieth century’s storminess seems unexceptional. In the example of Western Europe, storminess was very severe four centuries ago.

The solution to weather catastrophes—a fear of which is hard-wired in humans—is not to implement ineffective policies out of a vague concept of precaution, but to strive for scientific facts.
EU Emissions Trading Off to S

Scheme triggered by Kyoto will pit nations, social groups against one another

By James L. Johnston

British Prime Minister Tony Blair, during a June 7 meeting with President George W. Bush, pressed hard for the U.S. leader to support the Kyoto Protocol. Blair’s lobbying pleased environmental activists back home but masked very troubling developments for European adherents to Kyoto. The European Union is having a very difficult time complying with the treaty.

The June 9 Financial Times reported in the wake of the Blair-Bush meeting, “the UK itself is likely to miss the targets set by Mr. Blair for the reduction of greenhouse gas emissions.” That forecast is especially ominous given that the UK’s burden was substantially lightened by grandfathering in emission reductions that preceded Kyoto and had no connection to the treaty.

The June 9 New York Times observed, “the greatest reduction in emissions has already been achieved, by the switch that happened in the 1990s from using coal to generate electricity to using gas instead.”

The United Kingdom is not alone in having trouble complying with Kyoto. Reports the Competitive Enterprise Institute’s Iain Murray, “The EU is almost certain to miss its collective targets for the first Kyoto period. While the EU as a whole is committed to an 8 percent reduction in emissions (on 1990 levels), the EU itself admits that policies currently in place (other policies are unlikely to be adopted) will lead to a reduction of only 1 percent in 2010. The implications of this are huge.”

Broad Outline of Trading Scheme

The Kyoto Protocol became effective on February 16, 2005, 90 days after Russia ratified the treaty. It took signatures who emitted at least 55 percent of the world’s greenhouse gases in 1990 to bring the treaty into force. Russia’s 17.4 percent pushed the protocol over that mark.

Work on the emission trading scheme has been proceeding in parallel with the ratification process. A three-tiered structure has been created. At the bottom are 12,000 or so corporate entities. Above them are the member states, which must design their national trading system and approve the initial allocations of the allowances. At the top is the European Commission, which reviews and approves (or rejects) the national allocation plans. The commission also will ensure compliance with the reductions agreed to in the Kyoto Protocol and settle disputes among the member states.

There will be two phases in the emissions trading scheme. The first will last from 2005 to 2007 and the second will occur from 2008 to 2012. Member states can allow banking in these two phases. However, the member states have thus far not allowed banked credits to be carried over from the first phase to the second. That sends a counterproductive message to firms that are prepared to reduce emissions early. It also puts in doubt the expected cost savings from emissions trading.

By contrast, the allowances under Title IV of the Clean Air Act Amendments of 1990 do not expire unless used. Thus, the allowances can be banked for use at some future time, like during an oil shock.

“While the EU as a whole is committed to an 8 percent reduction in emissions (on 1990 levels), the EU itself admits that policies currently in place (other policies are unlikely to be adopted) will lead to a reduction of only 1 percent in 2010. The implications of this are huge.”

IAIN MURRAY
COMPETITIVE ENTERPRISE INSTITUTE

International Trading Difficult
Trading of emission allowances by companies even in different EU member states will be complicated given the variations in national allocation plans. To help the process, each EU member state is slated to have its own greenhouse gas registry. The EU also will have a centralized trading registry.

According to David Hayes at Latham & Watkins, “There are substantial uncertainties surrounding the EU ETS [emission trading scheme]. As a preliminary matter, the three-step process required to develop a NAP [national allocation plan] has been a complex and difficult process. As a result, many MSs [member states] were late sending the NAPs to the European Commission, and the Commission in turn has been delayed in approving NAPs.”

Cross-border trading by companies involving nuclear power and carbon sequestration will not be allowed. Only member states will be allowed to buy and sell allowances from nuclear power and carbon sequestration. That will put a damper on the prices received by installations (individual corporate entities) selling allowances, because private companies will be excluded from the list of buyers.

This may be a partial payback for the refusal of developing countries such as China and India to take on Kyoto reductions. However, it also will reduce a major source of low-cost emission reductions.

An important omission from the emission trading scheme is the transportation sector. How this will be handled in the future is an important unsettled question.

Success Unlikely
The recent rejection votes on the very complex constitution for the European Union suggests trouble for the similarly complex EU emissions scheme. Moreover, there are enough clouds on the emissions trading horizon for existing systems to put the success of the EU scheme in further doubt.

That leaves one clear alternative for operators of emission installations. Companies and member states can simply reduce emissions and use the trading scheme merely as an emergency measure in case of an energy crisis. That is what is happening with sulfur dioxide allowance trading in the United States. At present, the prices for the modest amount of trading that currently goes on track the price of natural gas, which is the marginal, peak-load fuel for producing electric power.

The sulfur dioxide allowance price in the United States is currently at $730 per ton, up from $300 in 2003. That is similar to the rise of natural gas prices during the same period and signifi-
Washington State to Follow California on Auto CO2 Emissions

by James M. Taylor

Washington Gov. Christine Gregoire (D) signed legislation on May 6 that largely mirrors California’s controversial proposal to force mandatory reductions in automotive carbon dioxide (CO2) emissions. If implemented, the new law will require a 30 percent cut in automotive CO2 emissions from all new cars and light trucks sold in the state by 2016. However, those emission reductions are contingent upon the state having a complete emissions trading scheme that will take the form of hedging for emergency periods. Thus, the touted cost savings will not be realized with dire consequences for economic growth in the European Union.

California Law Challenged

In September 2004, California became the first state in the nation to attempt to limit automotive greenhouse gas emissions. The legislation, A.B. 1493, prompted a federal lawsuit asserting the state had usurped the federal government’s exclusive right to regulate fuel economy.

In comments submitted to the California Air Resources Board (ARB), and later repeated in its federal suit, the Alliance of Automobile Manufacturers (AAM) noted, “Controls on CO2 emissions from motor vehicles when measured on a per-mile basis are functionally the same as motor vehicle fuel economy standards.”

As such, AAM observed, the California legislation is “an attempt to regulate motor vehicle fuel economy, which is the responsibility of the national government under federal law. Motor vehicle fuel economy is currently regulated in California and nationwide by the National Highway Traffic Safety Administration (NHTSA), under a federal statute that also establishes controls at the ‘maximum feasible’ levels.”

Competitive Enterprise Institute (CEI) Senior Fellow Iain Murray pointed out that CO2 emission mandates threaten the safety of drivers and passengers. “The trouble is that the most cost-effective way to reduce automotive CO2 emissions is to reduce the size of the car, which makes them less safe.”

Iain Murray (iamurray@cei.org) is managing editor of Environment & Climate News.
Herbicides Winning Against Invasive Aquatic Weeds

by James M. Taylor

But recent successes in the battle against invasive aquatic weeds, the Virginia and North Carolina communities surrounding cross-border Lake Gaston are turning to precise herbicide spraying to eliminate nuisance weeds. But difficulties in coordinating a multitude of government agencies threaten to slow the pace of clean water progress.

Hydrilla Invades Lake

Lake Gaston straddles the border between North Carolina and Virginia and is the largest body of water in the central border region. Lake Gaston is not only beautiful, but it has been one of the most prolific freshwater fishing holes along the Atlantic seaboard.

In the 1980s, however, voracious invasive weed known as hydrilla took root in the lake. Native to Africa, hydrilla was imported to the U.S. for use in freshwater aquariums. In 1989 hydrilla was spotted growing in the Wild in Florida. Since then, it has spread to much of the southeastern U.S.

Hydrilla is a submerged weed that takes root at the bottom of shallow water and sends spindly stems of vegetation to the surface. It forms a thick, dense manse of vegetation that is virtually impermeable to boats, fish, and human swimmers. Hydrilla crowds out native vegetation, deprives fish of oxygen, blocks irrigation and drainage canals, harbors bacteria that cause human and animal diseases, and makes human recreation-al activities dangerous or impossible.

Herbicides Only Solution

Since 1985, the Lake Gaston Weed Control Council has fought a largely unsuccessful battle against hydrilla. Carp have been used to try to control the weed, but the fish eat beneficial weeds along with hydrilla, and their numbers cannot be controlled once introduced to the lake.

“Whenever I used to hear the words ‘chemical spraying’ in relation to bass fishing I would be ready to get in the ring and put up my dukes,” conceded Virginia B.A.S.S Federation State Conservation Director Ted Phipps on the group’s Web site, after attending a Lake Gaston Weed Control Council meeting.

“Fishermen Pledge Support

At first, fishermen opposed the use of chemical applications to treat the weeds. Fearing the chemicals would harm the lake’s fish, “no matter what we did, they were vocally against it,” Elton Brown, chairman of the Weed Control Council, told the Times-Dispatch.

Open meetings, education, and a his-
tory of successful chemical application, however, have turned local opposition into support.

Hydrilla coverage in Lake Tohopekaliga in central Florida. Annual surveys by Department of Environmental Protection regional biologists help determine the extent of invasive plants like hydrilla.
Michael Crichton’s latest novel is a significant cultural event.

In the past, his best-selling books have sparked public interest in genetic engineering, sexual harassment law, biotechnology, New Age religious thought, the search for extraterrestrial life, changing medical technology and bioethics, corporate ethics scandals, and other important trends. Now Crichton, a popular mainstream author, has chosen to ridicule environmentalism and other left-wing political activism and to challenge the intelligentsia’s central ideas about civilization itself.

Manufactured Disasters
State of Fear’s protagonist, Peter Evans, is personal attorney to multimillionaire George Morton, a political liberal who bankrolls a dizzying array of left-wing causes and organizations. Morton is involved with so many of these efforts that it is difficult for either him or Evans to keep track of where all the money is going.

One of the activist groups Morton supports most lavishly, the National Environmental Resource Fund (NERF), has come up with a plan to show the world, once and for all, global warming’s dire consequences for both the environment and humanity. NERF is diverting money to more radical eco-activists (modeled on real-life groups such as Earth First) to create four environmental disasters timed to occur during an international conference on global warming, sponsored by NERF.

Media Complicity
As Crichton’s narrative makes clear, the wealth created by modern economies is the one thing we can count on to make possible to preserve the natural environment. Starving people can’t afford to worry about the ecosystem.

Unfortunately, the Western media do not understand these economic realities, and they are central to Crichton’s story. To turn public opinion around, NERF and its allies concentrate on media exposure. The idea is “to structure the information so that whatever kind of weather occurs, it always confirms [our] message,” a conspirator says.

Logic has nothing to do with it, he continues. “Don’t you remember how long it took to establish the global threat of nuclear winter? It took five days. ... Without a single published scientific paper.”

“Crichton’s book reminds us that civilization is a good thing, that Western environmentalists long to destroy the modern economy that makes concern for the environment possible, and that a state of nature is a state of fear.”

The plan exploits the media’s narrow-minded laziness in ways that will ring true with readers. Crichton shows this beautifully in a scene in which a TV weatherman reporting on a local flood is revealed to be reading verbatim from a news release from the NERF Web site. “That’s how they do it, these days,” says a government agent named Kenner. “They don’t even bother to change a phrase here and there. They just read the copy outright. And of course, what he’s saying is not true.”

Beholden to Special Interests
Crichton also does a good job of showing that environmental activists are every bit as beholden to special interests as are the industry people they despise. The author is most sympathetic with the scientists caught in the middle of the debate, but as he shows, they are often all too willing to shade their conclusions, even if unconsciously, to match the needs of their funders. As Nick Drake, president of NERF, says, “Scientists can’t adopt that lofty attitude anymore. They can’t say, ‘I do the research, and I don’t care how it is used.’ That’s out of date. It’s irresponsible. Because like it or not, we’re in the middle of a war.”

Drake thinks this is a war against evil industrialists, but Crichton knows what it is really about. The activists want to destroy Western civilization and replace it with something they consider simpler and more humane ... while they retain the same prosperity and comfort they have now.

For instance, TV actor and eco-activist Ted Bradley says that life in Third World villages is “best and ecologically soundest. Frankly, I think everyone in the world should live that way. And certainly, we should not be encouraging village people to industrialize. That’s the problem.”

Kenner replies, “So you want to stay in a hotel, but you want everybody else to stay in a village.”

Keeping Developing Nations Poor
In fact, these activists hate the very idea of civilization. And as Crichton notes repeatedly, the environmental laws they back only further impoverish developing nations. Thus, while trying to undermine civilization at home, they thwart its spread abroad.

“You just don’t get it,” Kenner tells the arrogant actor Bradley. “You think civilization is some horrible, polluting human invention that separates us from the state of nature. But civilization doesn’t separate us from nature, Ted. Civilization protects us from nature. Because what you see right now, all around you [a merciless band of modern-day cannibals]—this is nature.”

Wealthy lawyers, journalists, actors, and musicians can afford to romanticize nature and blather on about how wicked and unfair Western civilization is, because that civilization pampers and protects them from all of nature’s ugly realities and cruelties. Crichton’s book reminds us that civilization is a good thing, that Western environmentalists long to destroy the modern economy that makes concern for the environment possible, and that a state of nature is a state of fear.

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INTERNET INFO
The Heartland Institute offers a feature on its Web site dedicated to following the debate over the science in State of Fear. It collects some of the many reviews, op-eds, and letters that the book has generated and also links to research on environmental issues and the environmental movement. Point your Web browser to http://www.heartland.org and click on the Crichton Is Right! graphic.
“Before government starts restricting people’s property, it should know to what extent a species is endangered. And that analysis involves numbers and hard counts.

Government must know which species are most threatened and to what extent they are threatened.”

STERLING BURNETT
NATIONAL CENTER FOR POLICY ANALYSIS

“Changes in how Florida classifies wildlife may ultimately mean a less politically charged label than ‘endangered for the manatee and other species considered most likely to die out,’” reported the April 13 edition of Florida Today. “Biologists say the new listing rules would lend more scientific credibility to how they determine how much protection the creatures need.

“The state list, [which is] separate from the federal endangered species list, typically drives which Florida wildlife receives the most government attention and money,” Florida Today added.

“Clearly, this change is for the better,” said Sterling Burnett, senior fellow with the National Center for Policy Analysis. “Once a species is listed, the government allocates resources to protect the species and its habitat, and develops recovery plans. These plans affect private property. Before government starts restricting people’s property, it should know to what extent a species is endangered. And that analysis involves numbers and hard counts. Government must know which species are most threatened and to what extent they are threatened.”

“I certainly favor more independent scientific review of information before a species is listed,” said Gretchen Randall, senior partner of the Winninggreen LLC public policy consulting group. “Using more local data, if it is current and unbiased, will also be a plus. The difficulty remains in determining the species’ population from which recommendations or decisions about listing are made.”

Focuses on Vulnerable Species

FWCC Chairman Herky Huffman told the April 13 Orlando Sun-Sentinel that replacing subjective decisions with more objective rules would improve consistency while still protecting vulnerable species. An important component of the new standards is a requirement that upon listing, all species must be afforded a management and recovery plan.

“I don’t care if they’re endangered, threatened, or whatever, they’ll have a plan,” said Huffman.

“All species that go through our process will get a plan that will outline what is required for recovery,” added FWCC biologist Dan Sullivan, as reported by the Port Myers News-Press on April 15.

Action for Manatees Debated

Opponents of the new standards include activist groups such as Defenders of Wildlife, Save the Manatee Club, and the Ocean Conservancy.

“It appears it’s going to result in the downlisting of many species that don’t warrant downlisting,” Elizabeth Fleming, Florida representative for Defenders of Wildlife, told the Sun-Sentinel.

Steven Webster, executive director of the Florida Marine Contractors Association, countered that objective data rather than emotional public relations campaigns should dictate whether a species is listed.

Noting that FWCC agents have spotted more than 3,000 manatees in state waters, and that many more undoubtedly exist but have yet to be identified, Webster explained to Florida Today, “The manatee is at best threatened, and may only be a species of special concern.”

“Resources are opportunity costs,” observed Burnett. “Resources devoted to one species are no longer available for protecting other species or for other unrelated projects that benefit the environment or human welfare.”

Goal Is Species Recovery

“Florida saw the need to update its imperiled species listing process, much as many in Congress want to update and strengthen the federal Endangered Species Act (ESA) so it actually recovers species instead of just listing them,” said Randall. “In the 31 years since ESA was passed, only 10 of 1,500 species have recovered enough to be de-listed. That is less than a 1 percent recovery rate.”

“We believe our actions today will make Florida’s process one of the most effective, science-based, recovery-oriented processes in the world, but we recognize the process may not be perfect,” Huffman noted in an April 14 news release. “That’s why we directed staff to provide us with updates about how the process is working and recommend further refinements as needed.”

“In moving to a more objective, numerical basis for listing species, the Florida Fish and Wildlife Commission has taken a step towards removing political agendas from influencing these decisions,” said Randall.

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Texas House Passes Takings Compensation Bill

Bipartisan support for measure that considers cost of environmental rules

by James Hoare

Citizens in Texas may soon be entitled to compensation when local governments enforce land use restrictions that substantially devalue their property.

House Bill 2833 would require a local government to compensate citizens when it imposes land-use limits on more than 55 percent of a property's surface area resulting in a greater than 25 percent reduction in property value.

Broad, Bipartisan Support

The bill, sponsored by State Rep. Rob Cook (R-Eagle Lake), received broad, bipartisan support in the Texas House, which approved the bill on May 10 by a vote of 117-24. The bill appears to have similar support in the Senate, but it faces vehement opposition from a small number of legislators.

Delaying tactics in both the House and Senate prevented the Senate from voting on the bill before going into recess at the end of May. The bill's supporters vow to revive the bill and send it to Gov. Rick Perry (R) in the next legislative session.

"It's heartening that some state legislatures continue to consider legislation to protect property rights from excessive land-use regulation," said Case Western Reserve University law professor Jonathan H. Adler.

"Many jurisdictions in our state are rightly protecting our natural resources through water quality measures and more," said Texas Agriculture Commissioner Susan Combs at an April 5 news conference. "However, the issue of excessive land use regulations and the impact on landowners who invested in Texas has to be considered."

Legislative Action Necessary

Land use and environmental restrictions that have reduced property values by as much as 90 percent have been upheld by the Texas Supreme Court (Quick v. City of Austin (1999)). Proponents of HB 2833 believe legislative action is the best way to correct what they see as injustices perpetuated by the courts.

"We have to be sensitive to the property owners in this state while we establish regulations that impact their property values," State Sen. Todd Staples (R-Palestine) said at the April 5 news conference. "This bill allows environmental regulations to continue while protecting property owners with the right of just compensation."

Strong support for HB 2833 has come from the Texas Landowners Conservancy (TLC), a nonprofit organization dedicated to the preservation of the state's natural resources and the protection of private property rights. According to an April 5 TLC news release, "TLC members support legitimate environmental protection measures but do not agree their land alone should be sacrificed to pay for the protections of an entire community, nor should their private lands be opened up for public access."

Sierra Club Claims Conspiracy

While HB 2833 has broad legislative support, some strongly oppose the bill. The Sierra Club, for example, contends the bill would hinder "imperious cover" regulations that limit the percentage of property that can be covered by driveways, rooftops, or other materials impervious to water. The Sierra Club claims imperious cover limitations are necessary to protect underground water quality.

According to a Sierra Club news release, "The MAJOR problem with the legislation, however, is that basically it is intended to STOP cities and other local governments from requiring imperious cover limitations and similar regulations to protect water quality. By making the potential price tag so high for local governments to try to establish these requirements in developing areas, the hidden motive here is NOT to 'compensate' landowners but rather to persuade local governments to abandon this approach to water quality protection" (emphasis in original).

Legislator Fires Back

Cook took issue with the organization's assertions. He told the San Antonio Express-News on May 18, "The agenda of a 10 percent imperious cover limitation (or buildable area) on a tract of land, as proposed by SOS (Save Our Springs) and others, is being disguised as a water quality measure when it is really intended to stop development altogether."

"HB 2833 would not interfere with cities' ability to protect water quality. Environmental experts have provided testimony that the highest levels of water quality and environmental protection are achieved through the sovereign's ability to make regulatory takings will be out of luck."
The Only Book You’ll Need on Plant Biotech

“The authors analyze ... all the major technical charges made against biotech by its many detractors. With great precision they defeat each false claim without bias, never calling the opponents what this writer is inclined to label them.”

This book is among the most meticulously documented and well-written science texts I have ever had the pleasure of reading. While I do not presume to have read every book produced thus far on modern biotechnology or plant genetics, I will nevertheless wager that no one has done it better.

In some ways it is four books in one. The authors tackle the ancient history of biotechnology, predating even Gregor Mendel and his famous garden pea studies in the yard of his monastery in the 1860s. But they also recount Mendel’s interest in the genetics of bees and mice, which few ever learn about.

The authors then follow the modern genomic advances by Crick and Watson, Cohen and Boyer, and all who came before, in between, and thereafter. They not only explain the moment-by-moment conceptual and laboratory development of these advances, but make every effort to teach the science along the way.

The latter part of the book reviews the political and sociological aspects of biotechnology in the modern world, offering unbiased, objective details before drawing the only possible conclusions. Simply put: Genetically modified plants are the answer to the world’s potential food supply problems; organic agriculture as it is presently defined cannot contribute significantly to society’s needs.

Genetic Engineering’s Long History

Genetic engineering is not new. For nearly a century, scientists have been cloning pink grapefruit from a mutant strain discovered on a tree in Florida in 1907. Scientists developed the Red Rio grapefruit in 1968 by exposing grapefruit buds to thermal neutron radiation at Brookhaven National Laboratory.

The most significant changes in grains and advances in knowledge about crop genomes occurred many years ago. When we eat wheat, we consume varieties mutated by nuclear radiation. It is not known what happened to the genomes, but we have been eating this wheat safely for decades.

Today, with more extensive knowledge and new applications of the technologies resulting from genetic engineering, our scientists have more control over the genetic changes introduced, and their work is more precise than ever before. Federoff and Brown methodically trace the development of nearly every major grain consumed by society today, providing details of their DNA mutations. They also trace the need for fertilizer and its early applications in the nineteenth century. For flower lovers, the complete story of Luther Burbank and his plant grafting techniques is noteworthy.

Roots of Green Revolution

Many readers will especially enjoy the full story of Norman Borlaug as it plays out on the pages of this book. Many people are aware that he won the Nobel Prize in 1971 for launching the Green Revolution, but few of us know the complete and wonderful details of his education, research, and teachings. And Borlaug’s story is not yet complete: He still works full-time in this field at Texas A&M University, traveling the world more than 150 days a year ... at age 90.

A brief summary of Borlaug’s Nobel Prize work is recorded in the book as follows: “As Borlaug explained in the Nobel lecture, ‘Through a series of crosses and re-crosses (of wheat) began in 1954, dwarfness was incorporated into the superior, new-combination Mexican types, finally giving rise to a group, or so-called dwarf Mexican wheat varieties.’ By changing the plant’s architecture to emphasize a short, sturdy stalk, the dwarfness trait allowed the wheat to produce heavier seed heads given enough water and nitrogen without falling over in a breeze. In addition, the plants were not affected by length of day (and so could grow at a range of latitudes) and were highly resistant to wheat rusts. The result, in Borlaug’s terms, was a ‘yield blast-off.’ A few seasons after the new variety was introduced Mexico became self-sufficient in wheat. When introduced into Pakistan and India, the wheat had the same yield-boosting effects.”

Explanation of Genetics

Genetics is by no means an easy science to understand, and I will not say this book makes a simple primer that is easily understood. But it does make significant breakthroughs in genetics education. For me this was one such example: “Genes can change, they can duplicate and delete, and genomes scramble. It is increasingly evident that what genes do depends more on what they are than where they are—although both a gene’s immediate neighbors and its general genomic neighborhood can influence its expression. But evolution takes a long time—like the movement of tectonic plates. The evolution of a plant is measured in millions of years, not in the months it takes to grow a crop of corn.”

Debunking Biotech Critics

The authors analyze in more detail than is warranted all the major technical charges made against biotech by its many detractors. With great precision they defeat each false claim without bias, never calling the opponents what this writer is inclined to label them.

No one has ever scientifically refuted the anti-biotech crowd as well as Federoff and Brown do in this book. Their patience in doing so is amazing.

Safety of Biotech Food

If you are interested in biotechnology and genetically modified foods, you have most likely read the stories of StarLink corn and monarch butterflies. But I promise you that you have never read the complete story of either of these.

StarLink corn is a biotech corn that was approved only for animal feed when some of it found its way into taco shells. Activist groups duped the media into reporting that this was causing widespread allergic reactions in people. Later, the Centers for Disease Control and Prevention (CDC) released a study showing that StarLink corn produced absolutely no adverse effects on people who had consumed it.

Similarly, activist groups duped...
the media into reporting that biotech corn fields were causing widespread monarch butterfly deaths. Later, EPA concluded that biotech corn posed very little risk to monarch butterflies.

The retelling of these fraud-filled scandals on the pages of Mendel in the Kitchen is alone worth the price of this book. Along the way you will learn precisely how grains that contain a gene that produces the protective Bacillus thuringiensis (Bt) bacterium work their damage upon unwanted insects ... and also why they cannot be harmful to man and other animals. They cannot be harmful to man and other animals.

Federoff and Brown also do a great job explaining all the precautions that have been taken by the government and the biotech industry to ensure the pests they target with Bt seeds do not become resistant to the toxins generated by the plant. This concern is continually thrown up by the anti-biotech crowd with no scientific support.

Predominance of Natural Pesticides

The book's chapter on organic food, titled "The Organic Rule," is the best primer on organic agriculture that you will ever find. Again the authors exhibit a complete lack of bias. Until the final pages of the chapter, one would have no idea which, if any, side of the organic food issue the authors lean toward.

But in the end they evaluate their own data and make many very strong and persuasive statements regarding the inability of organic farming to supply the needs of a hungry world.

In this chapter they also summarize the many contributions of Bruce Ames in eliminating the concerns over trace amounts of agricultural pesticides in our food. More than 99 percent of the chemicals people eat are natural. Coffee, for example, contains more than a thousand different chemicals. Twenty-eight of those have been tested in rodent bioassays, and 19 have been found to be carcinogenic in mega doses fed to rats and mice.

Plants produce many natural pesticides. Seventy-one of these have been tested, and 37 are carcinogenic in mega quantities to some rodents. Ames proves in a variety of ways that these high-dose rodent bioassays have no relevance to the health of human beings.

Ames estimates Americans eat somewhere between 5,000 and 10,000 natural pesticides every day, ingesting 1,500 milligrams of such chemicals per person. That is about 10,000 times more than the 0.09 milligram of synthetic pesticides they eat in conventionally grown food each day.

Ames concludes, "There is no convincing evidence that synthetic chemical pollutants are important as a cause of human cancer." He states emphatically, "If reducing synthetic pesticides makes fruits and vegetables more expensive, requires that more land be put under cultivation, and requires that more hard, manual labor be performed to harvest the crops."

Federoff documents this very well. When explaining the organic growth of potatoes in Bolivia she quotes Per Pinstrup-Andersen, former director general of the International Food Policy Research Institute (IFPRI): "To have enough manure, the organic farmers must either reduce the size of their potato fields or put more land to the plow. When the cost of the additional land is factored into the study, the figures for yield per hectare do not look so good. If we set aside the ecological risks of bringing more land under cultivation, organic farming may be a perfectly acceptable solution in regions with unused land that can be cultivated without damaging the environment." But, Federoff adds, "Such regions are becoming scarce."

Ebbe Schioler, a colleague of Pinstrup-Andersen at IFPRI, described the work environment of organic rice growers in Africa: "The weeds they faced were stout thistles, coarse grasses, large thick-leaved plants with tough stalks, and little bushes that produce powerful, deep-reaching root systems. The farmers use no herbicides. Everything is done by hand and hoe, and even though the children do their bit, it is still touch and go. It takes 40 days of sweating and straining each year to keep just one hectare of land weed-free."

Federoff concludes her chapter on organic farming as follows: "Suggestions that organic farming is appropriate for countries with high population pressure and limited arable land and water supplies sounds suspiciously like Marie Antoinette's famous statement, 'Let them eat cake.' Or as Peter Raven, head of the Missouri Botanical Garden, has noted, 'Organic agriculture is essentially what is practiced in sub-Saharan Africa today, and half of the people are starving, so it is clear that more [than organic techniques] is needed.'"

"Sustainable Agriculture"

While "sustainable agriculture" is a term that hides its intention to promote organic farming, Mendel in the Kitchen tells the real facts about what we would logically conclude to be meant by the term—namely, using land wisely to feed the world.

Economist Indur Goklany has calculated that were we still using 1961 farm technology, we would need to put 82 percent of the Earth's land surface under cultivation ... rather than the 38 percent we actually use. Borlaug calculates that the Green Revolution has saved 20 million square miles of wilderness since 1950. Dennis Avery of The Hudson Institute has pointed out that the world's 16 million square miles of forest would all have to be have been destroyed without modern agriculture.

The authors of Mendel in the Kitchen, in an effort to promote real sustainable agriculture, offer an excellent tutorial on reduced tillage and no-till farming. They point out that continuous cultivation has been a misguided bad habit driven by the desire to have pretty fields, the need to eliminate weeds before effective herbicides were available, and a lack of understanding of soil health.

Federoff correctly explains the basic reasons to reduce tillage on cropland: reduce runoff, increase soil moisture, eliminate soil erosion, improve soil tilth, increase carbon content, improve air quality, improve surface water quality, and increase wildlife habitat ... not to mention the saving on labor, fuel, and wear and tear on machinery.

Possible Future Breakthroughs

In the closing chapter, "Food For Thought," the authors open with a poignant quote from Dr. Florence Wambugu of the Kenyan Agricultural Research Institute. She said, "You people in the developed world are certainly free to debate the merits of genetically modified foods, but can we please eat first?"

In this chapter, readers are given more reasons for optimism about the future impacts of plant biotechnology than one could possibly imagine. Virtually all of the impediments to expanding crop yields around the world are linked to insufficient nitrogen fertilizer, inability to fix adequate quantities of carbon from the atmosphere while maintaining sufficient moisture uptake, or the inability to grow in soils high in salt or aluminum. These problems must be overcome if farmers' yields are to double or perhaps even triple to meet the demands of a human population that will reach 8 or 9 billion within 50 years and demand more and better food.

It seems unlikely the future holds another simple breakthrough, like the synergy between dwarfing genes and fertilizer that made the Green Revolution possible. But a breakthrough that enhances the use of nitrogen or the efficiency of photo-synthesis or the use of soils previously toxic to growth could push yields up dramatically.

Mendel in the Kitchen may ultimately hasten the day of such breakthroughs. It could be used as a college textbook in biotechnology for a variety of courses focusing on science, history, and politics. If you have an interest in any one of these areas, the book is a wonderful read.
Continued from page 1

are not only environmentally friendly but also save money in the long run by reducing energy costs. Supporters make additional claims ranging from improved student test scores to greater worker productivity and happier employees.

“We didn’t call this a green building bill,” explained Rep. Hans Dunshee (D-Snohomish) to the April 22 Seattle Post Intelligencer. “We called them ‘high-performance’ buildings so people didn’t think they’re just hippie beads-and-incense buildings.”

“We didn’t call this a green building bill. We called them ‘high-performance’ buildings so people didn’t think they’re just hippie beads-and-incense buildings.”

REP. HANS DUNSHEE
D-SNOHOMISH

According to a fact sheet published by one group advocating the new requirements, green buildings approved under the U.S. Green Building Council’s Leadership in Energy and Environmental Design (LEED) system would cost up to 2 percent more to build but would provide an “average cost savings of 39 percent for energy and 25 percent for water.”

Hidden Costs Pile Up
Real-world results, however, often fail to measure up to the promises of green building proponents.

In Arkansas, according to Realtor Magazine, green buildings cost between 7 and 10 percent more than regular construction projects. The state legislature recently enacted a green building mandate.

In Washington State, Franklin Elementary School in the Lake Washington School District was built following green building standards. The district’s director of support services, Forrest Miller, estimates costs were about 5 percent higher than typical construction.

Miller cited as an example an $180,000 “light harvesting” system of the type included in LEED standards. The system may ultimately save energy by adjusting the lighting based on what is needed to complement natural light, but the up-front cost was significant.

Ongoing Costs Not Included
That light harvesting system also illustrates the ongoing costs that are not factored into the LEED savings estimates. Because the system is complex new technology, it requires frequent maintenance, which creates a new ongoing cost.

LEED standards also recommend using natural light for heating. To make the most of sunlight streaming through the school’s windows, the school district has had to hire window washers at an additional cost of $5,000 per year.

Seattle’s new city hall, built to green standards, is also plagued by unexpected problems, according to a May 8 Fox News report. Shelves that were supposed to save energy costs by reflecting rather than absorbing light have instead created excessive glare, straining the eyes of city workers. A “green roof” of plants, which was supposed to produce oxygen and collect rainwater, has died. Hot water demands are only sporadically met, and indoor temperatures are often uncomfortably hot or cold.

“Tenants are uncomfortable, and we are wasting money heating and cooling air that is not reaching them,” concluded a city report, according to Fox News.

The problems with keeping workers comfortable are especially significant because green building proponents typically promise economic benefits that include future cost savings based on enhanced worker comfort and, therefore, increased productivity.

Difficult Tradeoffs Arise
Another example of promises failing to materialize is found in the Washington Environmental Council’s (WEC) fact sheet regarding Giaudrone Middle School in Tacoma. WEC promised Giaudrone would realize “energy savings of 35 percent.” After a year-and-a-half of operation, however, Giaudrone has the third-highest costs for gas and electricity of all middle schools in the district. Giaudrone now spends about 25 percent more than the average middle school in Tacoma on gas and electricity.

LEED standards track those set by another group, the Center for Resource Solutions, a San Francisco-based environmental organization. Its Green-e Standard defines renewable resources as “solar electric, wind, geothermal, biomass, and small or certified low-impact hydro facilities.” The standard for “low-impact hydro facilities,” in turn, was first set by the Low Impact Hydropower Institute.

Inherent in the renewables standard is a value judgment with which many environmentalists might disagree. The standard approves of biomass energy, which emits greenhouse gases such as carbon dioxide, but disapproves of large hydro power facilities such as dams, which do not emit greenhouse gases. The standard thus gives relatively less weight to the threat of global warming than to the threat dams pose to salmon.

Some environmentalists may be inclined to ask whether the potential impact on salmon is sufficiently great to justify replacing the approximately 50 percent of non-greenhouse gas-emitting energy that comes from hydro with other sources.

Todd Myers (todd@toddmyers.com) is director of the Center for Environmental Policy at the Washington Policy Center.
terrorist activities, they have surpassed “right-wing extremists, KKK, anti-abortion groups, and the like,” said Lewis.

“The FBI estimates that the [Animal Liberation Front/Earth Liberation Front] and related groups have committed more than 1,100 criminal acts in the United States since 1976, resulting in damages conservatively estimated at approximate-
ately $110 million,” Lewis testified.

FBI Notes Disturbing Trend
Although environmental activist groups have resorted to physical violence and even murder in Europe, eco-extremists in the United States have so far limited their tactics to violence against property and personal harassment and intimidat-
ion that has stopped short of personal physical violence. However, “the FBI has observed troubling signs that this is changing,” Lewis told the Senate Environment and Public Works Committee. “We have seen an escalation in violent rhetoric and tac-
tics. Attacks are also growing in frequency and size.”

“There is nothing else going on in this country over the last several years that is racking up the high number of violent crimes and terrorist actions,” said Lewis.

“[T]here is a disturbing underbelly to these activist groups that believes that detonating bombs, making death threats, physically assault-
ing people, and terrorizing through stalking are justified means of confront-
ing people with whom they disagree.”

DAVID MARTOSKO
CENTER FOR CONSUMER FREEDOM

Innocent People Targeted
On May 9, the Washington Post reported that earlier this year Animal Liberation Front (ALF) activists targeted the wife of a pharma-
caceutical company executive for par-
ticularly alarming harassment. The activists followed the woman to her work-
place, broke into her car, and stole her credit cards. Earlier, the activists had painted the words “Puppy Killer” on the couple’s home and posted on the Internet the couple’s home telephone number, license plate numbers, and bank account numbers.

Attacks also have been made against 30 other employees of the company, accord-
ing to the FBI. ALF has since threatened to target more innocent people with even the most tenuous connections to the company.

“Anybody who does business with this company, they become a legitimate target for the campaign,” ALF spokesman Jerry Vlasak told the Post.

“We all have things we believe in, but do we set bombs and light fires on fire?” asked the executive’s wife. “We live in a country where people shouldn’t live like that.”

“When most Americans hear about environ-
mental activists, they think about pick-
eting signs and street corner protests,” said David Martosko, research director for the Center for Consumer Freedom. “But there is a disturbing underbelly to these activist groups that believes that detonating bombs, making death threats, physically assault-
ing people, and terrorizing through stalking are justified means of confronting people with whom they disagree.”

“According to an FBI spokesman,” added Steven Milloy, an adjunct scholar at the Cato Institute, “this statement was recently made by one extremist: ‘If someone is killing, on a regular basis, thousands of animals, and if that person can only be stopped in one way by the use of violence, then it is certainly a morally justifiable solution.’”

“It is about time the federal government begins taking such terrorism seriously and begins prosecuting this unlawful behavior,” Martosko said.

PETA Funds Terror Groups
While ALF and the Earth Liberation Front (ELF) openly promote and perpetrate such terrorist acts, a more “mainstream” activist group is also having to defend its encour-
agement of ecoterrorism. On the frequently asked questions page of its Web site, People for the Ethical Treatment of Animals (PETA) was asked to respond to the question, “How can you justify the millions of dol-
ars’ worth of property damage by the Animal Liberation Front (ALF)?”

PETA responds: “Throughout history, some people have felt the need to break the law to fight injustice. The Underground Railroad and the French Resistance are both examples of people breaking the law in order to answer to a higher morality.”

“PETA may be willing to equate medical researchers with slaveholders and Nazis,” observed Milloy, “but that’s quite a leap in logic and morality for most people.”

During the 1990s, PETA made grants and loans totaling $70,990 in support of a self-described ALF member later convicted of committing arson at Michigan State University, noted Martosko in the Senate hearings. PETA also has advertised that its leader, Ingrid Newkirk, “speaks for the Animal Liberation Front,” testified Martosko.

ALF Member Advocates Murder
Martosko notes on the Center for Consumer Freedom Web site, “In 2003, self-appointed ALF spokesman Dr. Jerry Vlasak, while acting as a spokesperson for the Physicians Committee for Responsible Medicine (PCRM), openly endorsed the murder of doctors who use animals in med-
tcal research, saying, ‘For 5 lives, 10 lives, 15 human lives, we could save a million, 2 million, 10 million non-human lives.’ When a member of his audience objected, comparing Vlasak’s approach to that of abor-
tion-clinic bombers, he replied, ‘Absolutely. I think they had a great strategy going.’”

According to Martosko, “In 2001, PETA made a direct contribution of $1,500 to the North American Earth Liberation Front (ELF) to ‘support their program activities.’ Among its long list of crimes, ELF claimed credit for the 1998 fire-
bombing of the Vail Colorado Ski Resort, resulting in $12 million in damage.

“The public must realize that terror-
ist groups such as ELF and ALF receive support and funding from groups like PETA and the Humane Society of the United States,” Martosko said. “The underbelly of these more respected groups will continue to put on their ski masks unless their actions are called to the attention of the public.”

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land.org) is managing editor of Environment & Climate News.

INTERNET INFO
May 18 testimony by John E. Lewis, David Martosko, and others before the Senate Environment & Public Works Committee is available online at http://epw.senate.gov/hearing
_statements.cfm?id=237836.

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- **RESERVED TABLES (Seat 10)**
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