

PERC REPORTS

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COVER STORY

New technology could open up the long-awaited possibility of property rights in whales—but international whaling regulators shun it.

- 3** **HUNTING—AND SAVING—WHALES**
Global positioning and DNA monitoring are techniques that could protect whales. *By Gregory B. Christensen and Brian C. Gothberg*
- 7** **FISHING ON THE RIVER TWEED**
A unique system of private rights makes fly-fishing a different experience in England and Scotland. *By Seth Zuckerman*
- 10** **POLITICS MANAGES THE PUBLIC LANDS**
Senator Tom Daschle takes care of the Black Hills National Forest while much of the West burns. *By Linda Platts*
- 12** **GREENER PASTURES**
Divers retrieve old trees. Cows fuel a power plant. A packaging material decomposes. Computers hum again. *By Linda Platts*
- 14** **TANGENTS**
Some income-reducing regulations (including many from the EPA) kill people, on balance. *By Daniel K. Benjamin*
- 16** **LETTERS TO THE EDITOR**
Carl Pope of the Sierra Club argues that libertarians should worry about loss of freedom from environmental harm.

FROM THE EDITOR

PROPERTY RIGHTS ON THE HIGH SEAS?

Ever since Terry Anderson and P. J. Hill wrote a revisionist article about the “not so wild, wild West,” PERC associates have been optimistic about reducing the tragedy of the commons through private property rights. Their *Journal of Law and Economics* article (April 1975) pointed out that the invention of barbed wire enabled landowners to fence cattle in arid lands where there were too few trees to make fenceposts. Barbed wire enforced property rights and protected land stewardship.

More recently, PERC has explored ways to avoid other tragedies of the commons. Don Leal’s primer, “Fencing the Fishery” (www.perc.org) does that for many areas of marine fishing. And in this issue of *PERC Reports*, we look at whales.

Can whales be corralled through twenty-first-century technology? Gregory Christainsen and Bernard Gothberg say, in effect, yes. Their article explores how. Sadly, however, the International Whaling Commission is turning a blind eye to the emerging technologies that make enforcement of private property rights in whales a possibility.

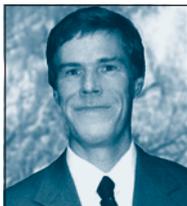
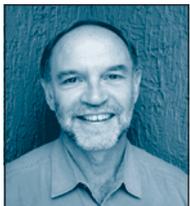
Property rights to whales may be some distance in the future, but property rights to sportfishing in England and Scotland have been around for centuries. Seth Zuckerman, an environmental writer, cast a few lines out on the River Tweed and talked with local owners of “fishings” to learn for himself the social and environmental impacts.

Back at home, Senate Majority Leader Tom Daschle has inadvertently entered the debate over how to keep our forests from turning into charcoal. Even as environmental groups around the country engaged in lawsuits to stop logging on our national forests, Daschle quietly attached an amendment that mandated logging on the Black Hills National Forest. Such a move is good for the Black Hills, says Linda Platts, but it illustrates that politics, not forest managers, determines what happens with our publicly owned timber.

Finally, a debate over free market environmentalism in the June 2002 issue evoked a probing commentary from Carl Pope, executive director of the Sierra Club. Not to let a good conversation lapse, Kenneth Green and Fred Smith responded. (And we have a couple of other letters, too). Enjoy this issue, and consider contributing your own thoughts to our forum on free market environmentalism.

Jane S. Shaw

From left: Anderson; Hill; Christainsen; Pope.



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HUNTING AND CONSERVING WHALES

NEW TECHNOLOGY MAKES BOTH POSSIBLE

By Gregory B. Christainsen and Brian C. Gothberg

In July, forty-five pilot whales, stranded on the coast of Cape Cod, died in spite of repeated efforts by volunteers to save them. This sad event offered just one minor consolation: News coverage of the whales' plight informed people everywhere that there are still whales in the oceans—perhaps many more than they had realized.

No cry of environmentalists has been as loud as “Save the Whales!” The demand to protect whales, backed by public conviction that most whales are endangered, has spurred the International Whaling Commission (IWC) to maintain its moratorium on commercial whaling, even though some stocks of whales are now clearly abundant. The purpose of this article, based on a longer one in *The Technology of Property Rights* (Christainsen and Gothberg 2001) is to offer a more rational approach to public policy with respect to whales.

A key to a more rational policy is technology that makes it possible to know which vessels are conducting whaling, where they are located, and what whale meat is being sold. This knowledge is not only useful for enforcing existing whaling regulations; it could also support the adoption of individual transferable quotas or community development quotas (ITQs or CDQs). Such an approach to the conservation of marine life has successfully prevented overfishing of species from Alaska to New Zealand (Muse and Schelle 1988, Leal 2002). Ultimately, improvements in technology could lead to the low-cost tagging of individual whales and thus make feasible individual whale ownership—just as branding and fencing methods made feasible the ownership of cattle.

Today, the view that almost all killing of whales is wrong (with exceptions made for hunting by aboriginal peoples and for certain research purposes) drives the International Whaling Commission. Antiwhaling forces have gathered strength ever since 1972, when the United States first proposed a ban on commercial whaling. Animal rights activists led by Greenpeace later packed the IWC by recruiting additional nonwhaling countries to become members (Spencer and Bollwerk 1991). The enlarged IWC then approved a moratorium on all commercial whaling in 1982. The moratorium became effective in 1986.

This moratorium led both Canada and Iceland to withdraw from the commission. After 1987 Japan decided to harvest 300 whales per year (for allegedly scientific purposes), and Norway resumed commercial whaling in 1993. Meanwhile, the IWC asked its Scientific Committee to devise an improved management process for governing whaling, a gesture that suggested

Today, the view that almost all killing of whales is wrong drives the International Whaling Commission. Antiwhaling forces have gathered strength ever since 1972, when the United States first proposed a ban on commercial whaling.

The IWC's plan would also rely on the human eye to monitor the activities of whalers. The government of each whaling nation is supposed to appoint and pay for inspectors to watch over whalers who operate in its coastal waters. There are also provisions for the possible use of international observers appointed by the IWC.



that whaling could be resumed on a larger scale if whale stocks appeared to be abundant. The committee estimated that the area south of 40 degrees south latitude probably contains more than 750,000 minke whales. In 1994, however, the IWC announced steadfastly that no commercial whaling was to be permitted in the region, whereupon the head of the Scientific Committee resigned.

This situation is ironic because the IWC has identified numerous technologies that it could use to enforce whaling regulations. The techniques, part of the IWC's proposed Revised Management Scheme or RMS, would go into effect if commercial whaling resumes under IWC jurisdiction. They include satellite monitoring of whaling vessels, onboard observers, and (probably) DNA testing of whales and whale products.

Under the proposed plan, large whaling vessels would be monitored via the twenty-four satellites of the U.S. Department of Defense's global positioning system (GPS). Shorter boats, such as those used by Norwegian whalers, would have to at least be able to communicate with authorities by means of shipboard radio.

DNA technologies would probably play an important part as well. Like humans and other animals that reproduce sexually, each whale has a unique genetic code that is revealed in tissue samples (Baker and Palumbi 1994; Cipriano and Palumbi 1999; Palsboll et al. 1997). Samples can be collected by a small dart on a tether to nick the surface of the whale and retrieve a tiny piece of tissue (Lambertsen 1987), by collecting streamers of skin that peel off whales as they bump against each other during social contact (Clapham et al. 1993), and by samples taken from dead whales after either hunting or natural death. As with human fingerprints, a database of many individuals can be built over time. If products are being sold from illegally hunted whales, their DNA can be checked against the entries in the database. Norway has already established such a database.

Earthtrust, an environmental group based in Kailua, Hawaii, has developed a same-day field test for a whale species that uses a DNA polymerase primer, a chemical that highlights only the DNA characteristics that exist in a single whale stock or population. Using this approach, Earthtrust



Mike Johnson (www.earthwind.com)

Under ITQs, each whaler would have a share of this total allowable catch (which would change from time to time as new evidence emerged regarding the size of each stock). Whalers could legally catch additional whales only by buying up catch rights held by others. Conversely, whalers who did not want to use their entire quotas could sell some of their rights.

has been able to show the origin of meat sold in Japanese markets. Most of the sampled meat has been from (legal) Southern Hemisphere scientific hunting of minke whales, but some has been from protected whale stocks or from dolphins (Earthtrust 1996). The good news is that the extent to which protected whale stocks have been raided appears to have declined over time, perhaps in part because of the advent of DNA testing.

The IWC's RMS would also rely on the human eye to monitor the activities of whalers. The government of each whaling nation is supposed to appoint and pay for inspectors to watch over whalers who operate in its coastal waters. There are also provisions for the possible use of international observers appointed by the IWC.

However, the IWC has taken no steps to make the RMS a reality. Some commentators charge that the IWC discusses these methods simply to make it appear that the commission is considering allowing commercial whaling even though it has no such intention (Aron et al. 1999).

Logistically, the new techniques have even greater potential. They could allow individual transferable quotas (ITQs) to be applied to whales.

By assuring that each whaler can have a portion of the total catch, ITQs would end the open-access commons of the oceans, which led to declines in whales in the past. Under ITQs, each whaler would have a right to a future supply of whales, and thus an incentive to conserve whales for the future rather than capture as many as possible.

Each year the IWC could set total allowable catch limits for each stock of whales. Each whaler would have a share of this total allowable catch (which would change from time to time as new evidence emerged regarding the size of each stock). For example, a whaler with a 3 percent share of the harvest of northeast Atlantic minke whales would be entitled to catch 27 whales per year if the total catch limit were 900 whales annually. Whalers could legally catch additional whales only by buying up catch rights held by others. Conversely, whalers who did not want to use their entire quotas could sell some of their rights.

Freely tradable entitlements of the kind proposed here are sometimes seen as a threat to community traditions

because outsiders might buy up scarce rights. It would be possible to deal with such situations by vesting some whaling rights in communities rather than individuals. A community could still trade whaling rights with outsiders, but might choose not to do so. Tradable community development quotas (CDQs) for some fishing rights already exist for some Native American settlements in Alaska (De Alessi 1998, 46–47).

It would also be possible to vest certain conservation trusts with tradable rights to whales. An example of such a conservation organization is the Center for Coastal Studies (CCS), a private nonprofit group in Provincetown, Massachusetts (www.ccs.org). This organization currently uses satellite and radio tags to monitor the status of humpback and North Atlantic right whales from the coast of Maine to the tip of Florida. If a whale becomes trapped in fish netting or buoy lines or is otherwise in trouble, CCS is authorized by the National Marine Fisheries Service to engage in a rescue mission, typically by disentangling the whale.

A CCS endowed with tradable rights might occasionally sell one or two animals (e.g., to whalers) if their value were sufficiently high (and CCS could therefore get a very good price for them). However, the organization would only be able to sell whales legally if such a transaction would arguably result in a net enhancement of its conservation mission—perhaps by financing the purchase of new monitoring or rescue equipment. Giving up one or two whales from an abundant stock now could help save several others from an endangered stock at a later time. Public trust organizations might also be established to supplement private groups.

With the help of modern technology, a regime of tradable rights could thus be established that effectively conserves whale stocks while permitting a return to commercial whaling. When people are informed that many stocks of whales are not endangered, they generally support the idea of limited hunting rights (Freeman

and Kellert 1994), but as both American and British representatives to the IWC have admitted, current policy is based on emotions and not on science.

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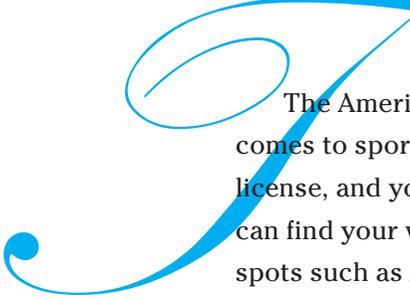
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FISHING ON THE RIVER TWEED

STEWARDSHIP THROUGH PRIVATE “BEATS”

By Seth Zuckerman



The American frontier hasn't closed yet, at least not when it comes to sportfishing. Angling remains open to all: Buy a fishing license, and you may fish as often as you want, wherever you can find your way to the stream or the sea. In popular fishing spots such as Alaska's Kenai Peninsula, anglers crowd the riverbank shoulder to shoulder. Locals deride the pursuit as “combat fishing,” where participants must fend off other anglers before they can try to hook a salmon. Even if catch quotas ensure that enough fish survive to sustain the run, the quality of the anglers' experience leaves much to be desired. What's more, there's little incentive for the anglers to be good stewards of the place where they fish.

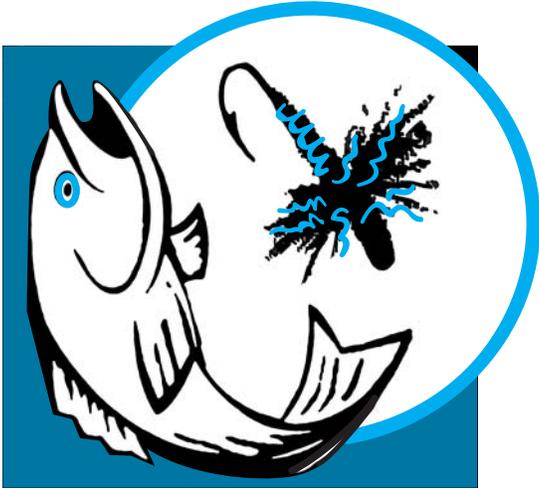
It doesn't have to be that way. On many European rivers, even sportfishing rights are privately owned. If you aren't one of the owners and you want to cast your line into the waters, you must rent the right to do so—at prices that can exceed \$1,000 per day.

Curious about how private angling might work and what it might mean for a salmon fishery, I journeyed this summer to the River Tweed on the Scottish-English border to take a look.

The Tweed's system dates back to the twelfth century, when Scottish King David I first granted exclusive fishing rights to monks who fished for subsistence. Over time, monarchs parceled out salmon rights to dukes and other nobles, sold them to raise money, or awarded them in exchange for service to the Crown. Like any other property right, these “fishings,” as they are called, have been bought, sold, and bequeathed ever since, often separately from the adjoining land. Most are sportfishing rights, although a few commercial netting stations still remain active near the river mouth.

Today, the Tweed's fishings are held by a total of about sixty owners, who each control salmon angling in a reach of river known as a “beat.” A beat is anywhere from half a mile to three miles in length, and can accommodate only a certain number of anglers, known in the trade as “rods.” Owners rent (or “let”) the right to fish on a specific date for a fee that ranges from £25 (about US\$ 40) to £900 (\$1,350) per day, depending on how close to the peak of the season, and how good the fishing waters are

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On the Tweed, a subtle combination of social norms and economic forces continues to protect the salmon run. The owners have a long-term stake in taking care of the salmon. That abiding interest grows out of their property rights.

on that beat. “There is a premium on actually being able to catch a fish,” observes Tony Coleman, the chief of the river’s bailiffs (wardens). Fees to fish the Tweed reflect its reputation for good angling, with the highest annual catch of any British salmon river.

Those fishing fees aren’t pure profit for the owners, however. Owners supply a guide who shows the anglers to the fishing holes and acquaints them with local fishing rules and practices, although he doesn’t necessarily stay with the angler all day. Most importantly, the guide keeps track of the number of fish landed, since the owners pay a levy to the River Tweed Commission based on their average annual catch—£46 (about \$70) per fish per year. On the Tweed, where about 10,000 fish are landed each year, that assessment pays for poaching patrols, biological studies, and the core of the habitat restoration budget. “It’s a circle: We keep the fish going, which keeps the fishing going, which keeps the riparian owners going, ad infinitum,” Coleman says.

The system has evolved over the years to be self-policing and self-regulating, especially given the stability of rural British society. For instance, you might expect that owners would underreport the catch on their beat in order to shave the assessments they owe to the river commission. But few do so. Since levies are calculated on a five-year average catch, it would take several years for the underreporting to put a dent in their annual bill. Meanwhile, since monthly catch figures per beat are a matter of public record, underreporting owners would create an impression that the fishing on their beat is poor, lessening demand from anglers. (Those figures are available for many of the Tweed beats at an on-line booking site, www.fishtweed.co.uk.)

Underreporting would also reduce the value of an owner’s beat, which is calculated as a multiple of the average annual catch. “The capital value of a salmon today is in the region of seven or eight thousand pounds,” says Jennifer Lovett, treasurer of the Tweed Foundation and herself an owner of two prime beats in the middle Tweed. “So if you have a beat with a ten-year average of 300 fish, multiply by 8,000 pounds, and it has a capital value of 2.4 million pounds.”

Other feedback loops help to keep the fishing pressure

in check. Although owners can decide unilaterally to increase the number of rods on their beat, they risk getting a reputation for squeezing too many people onto a stretch of river. After most commercial salmon netting had been phased out, some owners allowed more angling, but Lovett did not. “One wanted to see how other beats were performing where they had increased the rods,” she says in her understated British manner. Several of her clients came back to her beat after trying out a neighboring stretch of river that had doubled the number of anglers permitted, confirming her decision to hold her number of rods steady.

Even beyond market forces, informal pressure also helps forestall the temptation to rent a beat to more anglers. After all, those anglers could deplete the number of fish on neighboring beats. “If an owner were to put a lot of rods on, he would be generally frowned upon and his peer group of owners would feel pretty aggrieved about it,” explains James Leeming, a letting agent who books anglers onto the Tweed. “I think there would be a certain amount of persuasion to try to make him be sensible. But by and large, we haven’t had that problem.”

The owners are motivated to exert that pressure because they have a long-term stake in taking care of the salmon run. In this case, that abiding interest grows out of their property rights. (It helps, too, that the owners are mostly private individuals and small-time syndicates with long investment horizons.)

The owners’ concern for the salmon led to some of the earliest water pollution laws in Britain, says Duncan Glen, who directs habitat restoration efforts for the Tweed Foundation. During the Industrial Revolution, numerous textile mills sprang up next to the Tweed (hence the name of the fabric), and their dye-works fouled the river. The Tweed’s main tributary was “oozing, not flowing—a mere sluggish injection between ink-scummed pools,” Glen recites, quoting the nineteenth-century poet John Ruskin. But pressure from the fishing owners catalyzed opposition

to the dumping of this waste into the river. The owners had enough political clout and social standing that they could face down the industrialists who had an interest in continuing to pollute.

One consequence of the Tweed’s private fishing regime is that the best angling is available only to those willing and able to pay handsomely. For the rest of us, the options are to fish on a cheap day when few fish are in the river anyway, or to work through a local angling association. These clubs lease salmon fishing rights on a few beats and sublet them cheaply to their members. “The majority of the salmon fishings that are on [angling] association waters would not be what you would consider as A1, top-notch, but nevertheless, it’s still salmon fishing,” says chief bailiff Coleman. In one instance, the clubs are given the mid-week fishing rights on a prime beat as long as they pay the owner’s assessments resulting from any salmon that are caught.

Angling associations play an even more central role in the trout fishery. Unlike salmon fishing, these rights run with ownership of the adjacent riverbanks, but most are leased for the long term to local fishing clubs. These clubs control the number of anglers who can occupy each stretch of river and provide low-key oversight to ensure that anglers abide by the rules. Because they have a long-term right to fish that part of the river, Coleman says, “invariably, trout club members will take care of their own waters.”

That principle plays out differently in diverse societies—from the River Tweed to family-owned indigenous dip-netting sites on the rivers of the American northwest coast. On the Tweed, a subtle combination of social norms and economic forces continues to protect the salmon run, in an evolution of a system that has been in place for more than 800 years.

Seth Zuckerman writes for the Tidepool.org news service, a project of the Oregon-based group Ecotrust. Ecotrust promotes an ecologically sound economy for western North America’s rainforest region.

POLITICS MANAGES OUR PUBLIC LANDS

While Daschle slipped his amendment in on the quiet, his message came through loud and clear: Public land management is totally politicized. On-the-ground federal land managers have little authority to care for the more than 400 million acres in their charge. They are often taking orders from Washington politicians who know nothing about forest health.

TOM DASCHLE SHOWS HOW

By Linda Platts

Senate Majority Leader Tom Daschle brings many skills to his job, including one few of us knew he possessed—that of professional land manager. In late July, he quietly attached an amendment allowing timber sales and fire-prevention treatment in his home state of South Dakota to a bill concerning terrorist attacks.

With wildfires raging through many western forests this summer, Daschle is determined to protect the tourist-rich Black Hills National Forest. Using a clever trade-off, he called for 3,500 acres to be added to a wilderness area, and then clearly stipulated that thinning and logging activities in the national forest will be exempt from forest plans, environmental laws, public comment, appeals, or judicial review. What's good for South Dakota is apparently not good for the rest of the country.

While Daschle slipped his amendment in on the quiet, his message came through loud and clear: Public land management is totally politicized. On-the-ground federal land managers have little authority to care for the more than 400 million acres in their charge. These trained professionals, supported by biologists, botanists, forest ecologists, and a host of other scientific experts, are often taking orders from Washington politicians who know nothing about forest health.

Nevertheless, with more than four million acres already charred and hundreds of new fires every week, Western politicians nearly trampled each other in their rush to win similar special treatment for their own states. Governor Jane



Doug Loneman

Hull of Arizona, Senator Larry Craig of Idaho, Representative Denny Rehberg of Montana, and many other western congressional representatives want to free national forest land from regulations and move full speed ahead with thinning projects.

Before ramming through legislation that could change the face of the West, it would be wise to consider how the current crisis came about. In the summer of 1910, a firestorm exploded in the Bitterroot Mountains and raged across Montana, Idaho, and Washington burning some three million acres. Smoke darkened the skies as far east as New York, it is said, and so traumatized the public that Congress voted to spend federal money for the first time on fighting forest fires. The new policy called for putting out every reported fire by 10 A.M. the next day.

Unfortunately, the politicians failed to consult the experts. Even then, forest scientists knew that fire had long been a part of healthy forest systems and that certain forest types were fire-dependent. Nearly a century later, we are facing the disastrous consequences of this misguided political decision to eradicate fire from our forests.

If we are to improve forest health, we need to get the politics out of forest management by severing the ties between the Forest Service and the congressional budget process. If the Forest Service was required to be self-supporting and generate its own revenues, managers would have the incentive to protect the long-term health of the resource. Freed from having to kowtow to politicians for their budgets, land managers could decide on the highest valued use of the land: recreation, wildlife habitat, watershed, or forest products.

Fiscal accountability would also be an essential component of any self-supporting agency. Year after year, the General Accounting Office has criticized the Forest Service for the severity of its accounting and reporting deficiencies. One particularly glaring error arose in fiscal year 1995 when the Forest Service could not account for \$215 million of its \$3.4 billion

operating budget. The GAO reports that the agency is “unable to reliably keep track of billions of dollars of major assets, cannot accurately allocate revenues and costs to its programs, and made significant errors in preparing its financial statements.”

Freeing land management agencies from political meddling and making them self-sufficient is not impossible, and could lead to a wealth of creative management approaches such as those now employed on some private forests. One in particular, the Clinch Valley Forest Bank, the brainchild of the Nature Conservancy, deserves mention.

The Clinch River Valley in southwest Virginia is one of the biologically richest watersheds in the country. Much of the land is owned by small private landowners, who may rely on the timber for income or to meet sudden cash needs such as medical emergencies and school tuition.

The Nature Conservancy has come up with a plan that links conservation with the land’s economic productivity. Landowners may deposit the legal rights to their timber in return for an annual dividend of about 4 percent on the appraised value of the timber. The individuals retain ownership, but the bank acquires the right to grow, manage, and harvest the trees in perpetuity. To fund the dividend payments, the forest bank will harvest and sell the timber in an ecologically sound manner that protects the health of the watershed and the forest.

Innovation should not be the sole province of the private sector. Our federal land managers, too, should provide our lands with the stewardship we expect and our lands deserve.

Linda Platts is PERC’s editorial associate and Web site manager. This article was originally published by Tech Central Station under the title “Timber Tom the Hypocrite” on August 5, 2002, and is available at www.techcentralstation.com.

GREENER PASTURES

By Linda Platts

WATERLOGGED

An unlikely treasure lies buried in the cold dark depths of Lake Superior. Its golden hues emanate not from precious metal, but rather old-growth oak, maple, birch, and elm. Scott Mitchen, a professional treasure hunter, is thrilled with his find.

During the late 1800s, millions of trees were cut and floated across the lake; however, some 10 percent sank to the bottom before reaching the mills. Many of these trees date from the 1500s, with 30 to 40 growth rings per inch, making them stronger and denser than almost all trees standing today. The fine-grained wood is highly sought after by architects, wood workers, discerning homeowners, and CEOs seeking a rich timeless look for the board room.

Mitchen discovered the first trees in 1989 and spent the next eight years negotiating his way through a bureaucratic maze of government agencies to get the permits he needed to raise the logs. By 1997 his company, Enviro-Recovery Inc., had 35 dive teams bringing up logs weighing as much as 5,000 pounds. Despite the seemingly high rate of recovery, Mitchen says his teams will only touch a small percentage of the timber at the bottom of the lake.

While filling a torrent of orders, Mitchen has also made an effort to educate the public about the history of the logs and their value. He has spent weekends in a 14-foot tank at the Mall of America in Minneapolis, demonstrating how he raises the weighty logs, and the Smithsonian Institution is interested in a timber exhibit.

The pristine condition of the timber prompted Mitchen to learn more about how it had been preserved. The answer is straightforward: Fresh water protects old wood. With that question answered, Mitchen realized that similar sunken resources must exist around the world. He has secured permits to lift logs from thousands of acres of shoreline in the United States and Canada, as well as along the Amazon.

—*U.S. Water News*

DUNG POWER

British dairy farmers are on the cutting edge of a new power source. The dung from their 5,000 cows is fueling a biogas plant on the north coast of Devon, England.

The project is a joint venture between Farmatic of Germany and twenty-eight Devon dairy farmers. The waste is collected and then allowed to ferment

Linda Platts is PERC's editorial associate and Web site manager (www.perc.org). "Greener Pastures" showcases market approaches to environmental protection and natural resource use that benefit private entities as well as the public.



for about twenty days to produce methane for the gas-fired generators. The plant is producing enough electricity to power about 900 homes.

The local community has thrown its support behind the eco-venture after concerns about potential odors were quelled. And it turns out that the dung can do more than just generate electricity. The waste slurry is eventually treated and returned to the local farmers as fertilizer.

—Reuters

IT'S A WRAP!

The search for bio-friendly food packaging material may have finally come to an end. EarthShell has developed a product from limestone, sand, and starch from potatoes or corn that will decompose within a few weeks when exposed to air.

This packaging, Ali-ITE, has two distinct advantages over many other new products. Production costs are the same or lower than existing paper and plastic foam materials, and it holds heat better. Thus it does not have to rest on its laurels as being “green.” It offers real benefits and potential cost-savings to fast food giants and others. Secondly, the company’s largest shareholder, Essam Khashoggi, is the younger brother of a well known Saudi investor and former arms dealer who offers deep pockets for research and development.

Developing Ali-ITE has been an expensive undertaking for Earthshell, which has spent \$270 million over ten years. Even with deep pockets, cash is beginning to run short just as the company is about to reach commercialization. If it can hang on for awhile longer, Earthshell could break into a \$12 billion food packaging market.

Currently, the company is attempting to interest other firms in licenses to produce and distribute the product. Three leading packagers have signed deals, and both McDonald’s restaurants and Wal-Mart stores have expressed interest in trying the product. Only

time will tell if Ali-ITE, named after one of Khashoggi’s sons, has a future as the clamshell package with a Big Mac inside.

—New York Times

COMPUTER CAREER

James Burgett, a 350-pound biker and ex-heroin addict, runs one of largest nonprofit computer recycling centers in the United States. Most of the money he makes is poured back into nonprofit activities. He has supplied refurbished computers to nearly every school in Oakland, Calif., human rights organizations in Guatemala, orphanages in Mexico, and disadvantaged people the world over.

His football-field-size warehouse in a run-down east Oakland neighborhood is stacked to the roof with obsolete computers and monitors. He processes 200 tons of equipment every month, with most of it coming from big banks and credit card companies. At first, he hauled the equipment away for free, but now the companies pay him.

Once at his warehouse, the computers are stripped of all their useful parts, and the glass, metal, and plastic go to raw materials recyclers. Burgett says the only waste he sends to the landfill is lunch leftovers and food wrappers.

His staff consists of a couple dozen volunteers who are referred by homeless shelters, rehabilitation programs, and parole officers for basic job training. He also has a few underemployed computer jockeys from Silicon Valley.

The refurbished computers are loaded with the free Linux operating system. Last year Burgett gave away 5,000 computers, and this year he is on track for 12,000.

The California Materials Exchange reports that more computers are being disposed of than are being sold new, and Burgett seems to be the living proof. He is on the lookout for a bigger warehouse.

—Wired News

TANGENTS

KILLING US WITH KINDNESS

By Daniel K. Benjamin

Economists long have argued that life-saving regulations can be counterproductive. Regulations are costly and reduce the income we have for other things. When people are poorer, they spend less on health care and safety measures and engage in riskier behavior. (For example, they buy smaller cars and visit the doctor less often.) Hence, regulations that reduce people's incomes cause fatalities to go up elsewhere, even as they cut them where intended.

In principle, high-cost health and safety regulations could lead to enough extra fatalities elsewhere to yield a net overall *rise* in mortality. To date, it has been difficult to obtain a reliable estimate of whether this has happened. Recent research (Gerdtham and Johannesson 2002) helps resolve this difficulty, revealing that any regulation costing more than about \$8.4 million for each life "saved" will cause overall fatalities to rise.

The study is based on information from three massive data sets covering more than 40,000 people in Sweden aged 20–84, spanning the years 1980–1996. Unlike prior studies, the authors are able to match individuals' wealth and income attributes with their initial and final health status, together with a host of demographic characteristics, including education and family size. With this information, they can control for other important conditions, such as the fact that people with high blood pressure or who are unemployed are more likely to die than other people of the same age and income. Similarly, they can control for the fact that married people tend to live longer and that those with children suffer even lower mortality rates. (Two is the right number of children if longevity appeals to you.)

By adjusting for these and other factors, the authors can home in precisely on the link between income and mortality, estimating the impact with an unprecedented degree of reliability. Assuming that an income loss is borne proportionately at all income levels, the authors find that a drop of about \$8.4 million in the nation's aggregate income will induce one more fatality in the economy.

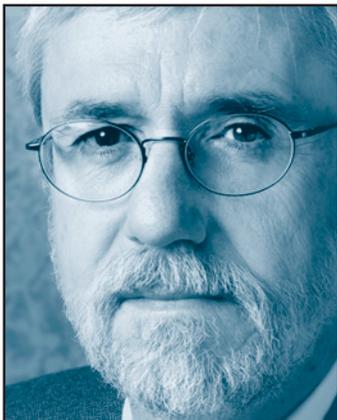
The practical import is that any regulation that costs more than about \$8.4 million to save one life will actually cause the overall mortality rate to rise, because the loss of income induces more than one fatality elsewhere. These findings can be used to evaluate the net impact on mortality of any health or safety regulation, or even the impact of supposedly life-saving medical interventions. To illustrate, Gerdtham and Johannesson apply their findings to health interventions in Sweden ranging from hypertension

economist, *n.* a scoundrel whose faulty vision sees things as they really are, not as they ought to be.

—after Ambrose Bierce

Daniel K. Benjamin

is a PERC Senior Associate and Professor of Economics at Clemson University. His regular column, "Tangents—Where Research and Policy Meet," investigates policy implications of recent academic research. He can be reached at: wahoo@clemson.edu.



The worst offender is the Environmental Protection Agency, which has an almost unblemished record of killing us with its regulations. Of sixteen EPA regulations studied by John Morrall, thirteen are killers. The asbestos standard was supposed to save ten lives annually. But its cost is so high that 170 people must die to save those ten.

treatment to vaccinations. For fully 10 percent of these interventions, the authors conclude that the net impact is a rise in mortality.

Because the study uses only Swedish data, the authors urge caution in applying it to the regulatory experiences of other nations. (The greater homogeneity and lower income inequality of Sweden, for example, might make their work unrepresentative of other countries.) I shall throw caution to the wind, however, and ask what we might learn about the mortality effects of some U.S. regulations. Thus, I have reexamined a classic paper by John Morrall (1986) on the costs of various federal health and safety regulations.

After applying an inflationary update to make his numbers comparable to the study at hand, I discover some facts that give cause for concern. On the bright side, all three of the Federal Aviation Administration regulations studied by Morrall cost less than \$8.4 million per life saved and thus arguably yield a net saving of lives. The same is true for all four of the National Highway Traffic Safety Administration rules.

The record is not so good for the Occupational Safety and Health Administration (OSHA). Indeed, the seventeen OSHA regulations studied by Morrall are about evenly divided between those cheap enough to save lives on balance and those (such as OSHA's ethylene dibromide and formaldehyde rules) so costly that they have no doubt killed far more people than would have died in the absence of the regulations.

But the worst offender is the Environmental Protection Agency (EPA), which has an almost unblemished record of killing us with its regulations. Of the sixteen EPA regulations studied by Morrall, two probably have saved lives on balance (one regulates chloroform and related chemicals, the other restricts fugitive emissions of benzene, such as at gas pumps). Another EPA rule (regulating uranium mines) is likely a "wash," killing about as many people as it has saved.

The other thirteen EPA rules are all killers. The arsenic standard, for example, costs almost \$27 million per life saved according to the official numbers. According to the Gerdtham-Johannesson analysis, this income loss itself leads to about three added fatalities elsewhere for each life saved. Thus, the standard yields a net *increase* in fatalities. Similarly, the EPA asbestos standard was supposed to save ten lives each year. But its cost per life saved (about \$145 million) means that 170 people die each year to save those ten. With friends like that, who needs enemies?

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LETTERS TO THE EDITOR

“WHY DID THE GREENS WIN?” EVOKES DEBATE

ENVIRONMENTAL DEGRADATION: A MASSIVE LOSS OF FREEDOM

Jane S. Shaw, a Senior Associate of PERC, is Editor of *PERC REPORTS*. She believes that vigorous debate about controversial environmental topics furthers understanding and lays the foundation for better policies. Send your letters to her at: *PERC REPORTS*, 502 S. 19th Avenue, Suite 211, Bozeman, MT 59718 or shaw@perc.org.



Your symposium on the energy bill, “Why Did the Greens Win?” intrigued me, even if it opened with a false premise—that environmentalists won much of what they wanted in the Senate energy bill. While environmentalists did succeed in blocking oil development in the Arctic National Wildlife Refuge, we are sufficiently alarmed at the rest of the bill that the Cato Institute and the Sierra Club jointly submitted to the *Washington Post* an op-ed calling for Congress to give the legislation a decent burial (published July 29, 2002). Both the Sierra Club and Cato are highly skeptical that something called a “comprehensive national energy policy” is a good way to keep members of Congress gainfully employed and off the streets.

You asked “how free market environmentalists might convey their messages more effectively.” But as Jerry Taylor and Kenneth Green trenchantly commented, several participants seem focused on outmaneuvering environmental values, not expressing them through free-market mechanisms. If libertarians continue, in Taylor’s words, to seek “a society that chooses tangible wealth creation over preservation of ecosystems,” my guess is that they will fail to convince the American public which, from most of the evidence, seeks a balance between those two goals .

Kenneth Green’s comment about ensuring that environmental regulations don’t constitute theft opened up one of the hidden and undebated fault lines—who owns what? To the best of my knowledge, most of the global ecosystem infrastructure remains an unpartitioned commons. No one owns the rain which falls on my backyard, the air which passes into my lungs, the ozone layer, the Atlantic ocean, or the genetic code that provides for the creation of everything from a mosquito to a prize black Angus. (Okay, a few tiny bits of that genetic code are, at least in the United States, owned.) And each of us is an equal shareholder in the public lands of the United States. Libertarians may argue that these commons would be better managed if they were partitioned and privately owned. But until this happens, it does not seem to me that it is theft for anyone to expect to enjoy his or her fair share of these amenities, undegraded, for free.

On the contrary, it seems to me that the theft occurs when anyone acts in a way which degrades someone else’s access to those amenities without freely given consent. Pollution, loss of biological diversity, disruption of global climate and weather patterns, exposure to risk from toxic

Note: To review the original discussion (PERC Reports, June 2002), see: www.perc.org/publications/percreports/symposium_fme.html.

substances, all would appear to violate fundamental libertarian principles at least as much as the government regulations put in place to limit those losses—but many of the participants in your symposium seem to reserve all of their anger and indignation for the regulations, and none for the massive loss of freedom represented by, say, the inability of women in the Great Lakes to safely eat fish caught by their families.

Carl Pope
Executive Director, The Sierra Club
San Francisco, CA

REGULATIONS CAN BE THEFT, TOO

KENNETH GREEN RESPONDS:

Carl Pope credits me with surfacing an important issue—that of ownership of the elements of nature often considered to be indivisible, and hence unsuitable for a property-rights management approach. Pope homes in specifically on my observation that the role of a libertarian environmental policy analyst (in my opinion) is not to dictate what level of environmental quality, or environmental resource allocation people “should” want. I argued that what we should be doing is to act as a watchdog, and ensure that where environmental laws are enacted, people are actually getting the environmental benefit they are supposed to get, without having some people use the force of government to deprive others of property or liberty under the guise of protecting the environment.

I’m in agreement with Pope that a legitimate function of law is to prevent people from harming others through releasing things into the environment in a way that (demonstrably) hurts other people’s health or property. And I agree with him that some elements of the environment such as the atmosphere and oceans are not easily managed with a property-rights approach. But Pope fails to see how environmental regulations can turn into theft. And there we part company quite sharply.

Pope comments that “it does not seem to me that it is theft for anyone to expect to enjoy his or her fair share of these [America’s unpartitioned commons] amenities, undegraded, for free. On the contrary, it seems to me that the theft occurs when anyone acts in a way which degrades someone else’s access to those amenities without freely given consent.”

But what about degrading the access of people who are handicapped or of limited economic means because of the elitist “hikers only” laws supported by groups such as the Sierra Club?

As an asthmatic teen of limited means, some of my experience of

nature came through camping, but all of my experience of “wilderness” came on the back of a small motorcycle I bought with my bar mitzvah money. That little Yamaha 80 took me to remote areas I could never have reached on foot, just following animal trails or ancient mining trails in the Mojave Desert. I remember sitting on a boulder 25 or 30 miles from the nearest road, late in the spring, watching the subtle, but diverse, wildlife of the high desert. With survival gear on my back, I had that feeling of autonomy that you just don’t get from riding a “handicapped access trail bus” through a tiny patch of national forest with 100 people you don’t know.

The laws against motorized vehicles in national parks of the sort supported by Sierra Club will deprive many people of that experience, as will the laws against snowmobiles and road-building. Many people can afford a one-time purchase of an inexpensive motorcycle or snowmobile, but fewer can afford the kind of time, training, and hiking equipment needed for twenty-mile hikes into the wilderness. And yet, my tax dollars are taken to protect systems I’m no longer allowed to use. I’m still unable to hike, now because of arthritic ankles, but I could still ride a dirt bike, snowmobile, or sea-doo into one form of wilderness or another, but of course, that’s increasingly illegal. To me, that’s theft.

I also feel robbed when I see “my” national forests burn to the ground because of mismanagement, and an insane opposition to environmentally sound use of timber and clearing of deadfall and brush.

And then, I sometimes feel robbed when I pay more for products because “my” natural resources are being sequestered away because of other people’s values for an ecological absolutism I may or may not share.

While environmental laws have done a lot to prevent people “stealing” from others through polluting activities, they’ve too often done so in a blunt-object way that limits choice, rather than expanding it. In doing so, it has deprived many people of meaningful

use of their “fair share” of our undivided commons in accordance with their values and abilities.

Kenneth Green
Chief Scientist, Reason Foundation
Harker Heights, TX

CARL POPE’S CHALLENGE TO FME’ERS

FRED SMITH RESPONDS:

Carl Pope offers a useful commentary on the energy bill—which he rightly notes serves neither economic nor ecological purposes. His continued challenge to free market environmentalists is to develop practical ecological privatization strategies (“Libertarians may argue that these commons would be better managed if they were partitioned and privately owned. But until this happens. . . .”)

One possible starting point might be to identify species not yet on any endangered list but which are viewed as “at risk.” Enact an ecological adoption law that would specify the conditions under which an individual or group could acquire ownership rights to a population of this species. The goal would be to test whether individuals empowered to directly protect—via acquisition of habitat and ownership—could play an effective role in species recovery. Exactly this role is played by various environmental groups for charismatic species—the peregrine falcon, the wolf. Why shouldn’t the idea be extended to the population at large and the broader array of less dramatic plants and animals? Pope seems sincerely open to ideas—his support of this idea would be valuable.

Fred L. Smith, Jr.
President, Competitive Enterprise Institute
Washington, DC

THE LEFT PRESENTS ITSELF AS SUPERIOR

I can’t resist commenting on the excellent discussion, “Why Did The Greens Win?” There’s no doubt that the “gentry-left” seems to have greater skills than we,

as measured by their ability to attract public support irrespective of actual facts.

I suspect Richard Belzer came closest to my own view when he commented on the importance of “perception” and “pretending.” (“Greens have changed how the public—superficially—looks at environmental issues, in large part by making it culturally unacceptable to disagree.”) That’s because the gentry-left presents itself as superior to the rest of us, and if you join with them, you too can be superior, whether it’s in terms of intellect, understanding, compassion, or even esthetics.

By pretending to admire the so-called “art” of Jackson Pollack or the so-called “architecture” of Frank Gehry, for example, you can claim superiority to those of us who don’t admire such things; in their view, we “lack the ability to understand what these brilliant minds are trying to do.”

Watching C-Span this morning, in a very basic debate over whether Amtrak deserves subsidies or not, every if-you-want-it-pay-for-it comment from the right was followed by a charge of idiocy or naiveté from the left. The gentry-left always goes *ad hominem*. We get the same thing on school bond and budget votes around here; every rejection is explained as “well, we failed to educate those ignorant louts of voters sufficiently, and next time we’ll speak even more slowly.”

Martin Harris
Architect
Vergennes, VT

DISTORTING THE MESSAGE

Your young intern got some of his story right (“How the Milesnicks Found Markets,” June 2002), but unfortunately, like much that comes out of PERC these days, he twisted the story to make it fit the “free market environmentalism” message which is PERC’s bread and butter.

The Milesnicks’ stream restoration efforts are great for both the environment and their ranching operation and were good enough to put them in the finals for the

National Cattlemen’s Beef Association 2001 Environmental Stewardship Award. But the fee fishing was really more an awakening to the potential of the spring creeks as a revenue-producing resource, not just a way to water the cattle. In the world of modern ranching, such additional revenue-producing activities can often mean the difference between keeping the ranch in the family or being forced to sell.

The author suggests that there was a “tragedy of the commons” here—that too many anglers had degraded the stream before the Milesnicks started to charge fees. In fact, the numbers of people using the stream were more a time-management hassle for the Milesnicks than an environmental problem. The streams were always excellent fishing, which is why so many people fished them so frequently.

Additionally, this could not be a “tragedy of the commons” because these were not “commons”—the streams are, and have been for a long time, on private land, with access by permission only. There was no “enforcement of property rights,” merely the production of revenue by charging people to fish where they had previously fished for free.

What really happened is that the *number* of people fishing grew with the expansion of the Bozeman area population. I fished this stream three decades ago, when Bozeman was a sleepy little town and Belgrade was little more than a sawmill and a stop sign. Now, the entire area is surrounded by new subdivisions and those subdivision dwellers would obviously seek to use such an outstanding resource in increasing numbers.

The move to fee fishing happily solved the use problems for the Milesnicks, while providing additional revenue for their wonderful ranch.

George Ochenski
Helena, MT

Mr. Ochenski, a free-lance writer, environmental lobbyist, and conservationist, wrote about the Milesnicks’ ranch and spring creek in the Spring 2002 issue of *Range Magazine*.

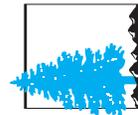
PERC REPORTS

Autumn begins early in Montana, as the air chills and we experience the last rain storms before the snow arrives. For those who can't watch them with us, we send this issue of PERC Reports.



Mandy-Scott Bachelier

PERC Reports showcases ways to address environmental problems through voluntary choices and local interaction. This issue shows some of the benefits of private property rights and the perils of politicization. PERC Reports is a forum for discussion. We welcome challenges, disagreements, and new ideas.



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