work. She argues that Sargent is now under attack because he questions the "classical explanation" for industrial melanism. Hooper garbles the controversy regarding background selection by moths, and she entertains Sargent's protracted speculation about phenotypic induction. (He has offered no evidence that melanism is an induced character in adult peppered moths.) But most egregious is Sargent's assertion that studies in North America falsify the classical explanation. The history of melanism in American peppered moths—which are conspecific with Kettlewell's moths, not a separate species as Hooper indicates—closely parallels what has occurred in Britain, and melanism is correlated in like manner with levels of atmospheric pollution (*2*). The American studies corroborate rather than contradict the classical explanation.

The case for natural selection in the evolution of melanism in peppered moths is actually much stronger today than it was during Kettlewell's time. Textbook accounts should be expanded to reflect this newer information, and they should not cite *Of Moths and Men* as a credible resource.

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BOOKS: ENVIRONMENT

Gold from Green Paths

David Pearce

I recently asked a well-known carbon trader if he had any idea of the total number of carbon trades that had taken place to date. He replied, "Around 350 up to 1998." Why had he stopped counting in 1998? "Because there were too many after that to count." In a carbon trade, an entity subject to a constraint (externally or self-imposed) on carbon dioxide emissions secures the required reduction in emissions through a third party. An electric utility might, for example, continue its own emissions at their current level but reduce net emissions elsewhere by paying for an afforestation program or an energy efficiency project. The utility gains because it is cheaper to cut emissions in other regions, especially in developing countries. It gets the paper "credits" for the carbon reduction. The environment gains because emissions are reduced. The host country gains because new technology and employment are generated by the investment. Such a trade is an instance of "market creation," a mechanism for paying for an environmental service to the mutual gain of the trading parties. My carbon trader had lost count of the trades because they have multiplied in anticipation of the implementation of the Kyoto Protocol. But many of the trades also reflect corporate "social responsibility," the notion that corporations should take on self-regulation to improve their image as environmentally concerned and to meet ethical goals.

Carbon trading is just one of the many good examples of environmental market creation that ecologist Gretchen Daily and journalist Katherine Ellison discuss in *The New Economy of Nature*. Citrus growers may compensate the owners of surrounding forests for maintaining those trees to protect the microclimate in the groves. Farmers and hydroelectric companies may pay the owners of upstream forests to retain tree cover for regulating water supply and avoiding reservoir sedimentation. Wetland owners may be rewarded for the filtering of water supplies and the regulation of effluent. Local communities may collect part of ecotourists' expenditure in return for protecting wildlife against poachers. The possibilities are endless.

The highly readable and openly journalistic book maximizes the chances politicians, entrepreneurs, and venture capitalists will pick up the theme that paying for the environment works. The authors give a slightly misleading impression that the initiatives are mainly American and very recent. Europe already has nascent official carbon trading schemes. Scandinavian countries pay for technology improvements in Baltic power stations to reduce the impacts of acid rain. Peugeot, based in France, has a US$12 million investment in forest conservation in Brazil. But the principles are the same: the environment generates services that have an economic value. Paying for those services provides an open recognition of the worth of those environments, and the resulting prices provide incentives for conservation. Although Daily and Ellison focus on developments since the 1980s, the origins of the approach go back to the 1960s, which saw both an important theoretical essay by Nobel prize winner Ronald Coase (*1*) and the original essay on tradable permits by Canadian economist J. H. Dales (*2*). Environmental economists have advocated market solutions for the past three decades.

The New Economy of Nature
The Quest to Make Conservation Profitable
by Gretchen C. Daily and Katherine Ellison
Shearwater (Island Press), Washington, DC, 2002. 270 pp. $25. ISBN 1-55963-945-8.

Daily and Ellison's account is full of fascinating mini-biographies of some of today's leading players, though there are many others who could have been included in the gallery of market-creation advocates. The authors are rightly cautious of some of the ventures they discuss. As in any field of business, there will be successes and failures. Some other caveats might have been included. Trades work when the trading partners are institutionally and politically stable. (The decimation of biodiversity in central Africa, for example, is unlikely to be the subject of market solutions.) And the massive extent of global illegal logging dwarfs the well-intentioned attempts at timber certification whereby consumers pay a little extra for sustainably managed timber.

But the truth is that everything has to be tried, and solutions based on mutual self-interest probably have a better chance of working than moralistic appeals to do the "right thing." *The New Economy of Nature* is a good place to start this learning process.

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Investing in a living river. The residents of Napa, California, accepted higher taxes to pay for natural flood protection. Levees and dams along the Napa River were removed so that high waters will spill over onto the historical floodplain.

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