

What's so new about ecosystem services?

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New ideas, *really* new ideas, are hard to come by. More often than not they are old ideas, polished and dressed up with new labels and jargon to fit the styles of the day. George Salt had the idea of aggregating species into functional groups more than a decade before Richard Root labeled such assemblages “ecological guilds,” and Charles Elton had the same idea well before that, and probably Charles Darwin before that, and Every new idea that sets off a flurry of activity in ecology or conservation seems to have been thought of before. We periodically reinvent the wheel, albeit with a flashier design, more chrome, and seemingly greater brilliance. But it's still a wheel.

“Ecosystem services” is a case in point. The idea is all the rage now. Financiers envision new markets that will pay for nature's values, agencies see a new way to justify their mandates, conservationists see an avenue toward broadening the constituency for protecting nature. But the idea itself, of course, isn't really that new.

One of my pastimes is browsing through old neglected books. A few evenings ago I picked up one published in 1922, *The Importance of Bird Life*, by one G. Inness Hartley¹. Hartley prefaced his book with a paragraph extolling how the bounties of America fueled its industry, but what caught my eye were the subsequent paragraphs:

“Coal- and iron-mines are largely responsible for rapid development of the United States. From California, Nevada, Alaska, and elsewhere vast deposits of gold, silver, copper, lead, a multitude of metals, some precious and others base though valuable, have presented enormous wealth to our country. Our great subterranean lakes of oil have made possible the expansion of the gas-engine and the automobile to their present state of efficiency. For centuries the banks of Newfoundland have filled our markets with fish. To the forests of Maine, Michigan, Wisconsin, and Oregon we owe a debt for timber which can never be repaid. From Alaska come sealskins, fertilizer from the phosphatic accumulations of the Carolinas and Florida, wild hay from the prairies, and so on through the mile-long list. The resources of America are immeasurable.

But, while we prick up our ears upon being informed that this fishery produces so many tons of fish worth so much, or that from that oyster-bed may annually be taken ten million oysters, or that so-and-so's manganese-mine accounted for a hundred car-loads of ore last year, we show little interest when we are told that a sparrow hawk captures ten score field-mice a year and innumerable grasshoppers. Yet these very sparrow hawks save the American farmer considerably more than the combined worth of the fishery, the oyster-bed, and the manganese-mine together.”

¹ Hartley, G.I. 1922. *The importance of bird life*. The Century Company, New York.

Leaving aside the realization of how much times have changed, or the somewhat tenuous nature of his calculations, it's clear that Hartley understood the economic value of wild nature, as did Thoreau and Leopold and many others. Why do we consider this idea something new? Partly because several books, the emergence of a new discipline of ecological economics, a report from the United States National Research Council, and the Millennium Ecosystem Assessment have given the idea visibility, quantitative substance, momentum, and coherence that it previously lacked. But there's more to it than that. Initial coarse calculations of the value of ecosystem services² have given way to more detailed economic analyses. A recent assessment by Anielski and Wilson³, for example, concludes that the annual value of Canada's boreal ecosystems in 2002 was on the order of CAN\$131 billion, of which the non-economic values are roughly 2.5 times the economic values.

As the astounding value of ecosystem services becomes more apparent⁴, dreams of new markets and payments for ecosystem services seem much less fanciful and are mobilizing action in both the financial and conservation sectors. Conservation is growing beyond nature protection to encompass the places where people live and work. These are the places where the values of ecosystem services are especially relevant. The links between ecosystem services, conservation, and human poverty are now made explicitly. So, while the idea of ecosystem services may not be new, it is being applied in new ways that are broadening the scope and relevance of conservation.

Sometimes, indeed, some buffing and polishing can give new life and vigor to old ideas. Perhaps the early ideas of Hartley and others didn't have a broad influence because the time just wasn't right, or because the ideas lacked some of the features that give ideas impetus, that make them stick⁵. In our rush to embrace ecosystem services as a central theme of conservation, however, let's not forget that people have been talking about the value of nature for quite some time. We might do well to pursue this "new" idea with a bit less hubris and a bit more humility, albeit with no less enthusiasm.

² Costanza, R., et al. 1997. The value of the world's ecosystem services and natural capital. *Nature* 387: 253-260.

³ See *Counting Canada's Natural Capital: Assessing the Real Value of Canada's Boreal Ecosystems* (<http://www.pembina.org/pubs/pub.php?id=204>).

⁴ Hartley, no economist, thought the cash value of bird life to humanity was "staggering in its magnitude".

⁵ Heath, C., and D. Heath. 2007. *Made to Stick. Why some ideas survive and others die*. Random House, New York.