

Ecological Beauty, In the Eye of the Beholder

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No one loves a thistle.

Okay, okay, a goldfinch, foraging for lipid-rich seeds does, but not your neighbor, not your local park superintendent, not your golf course manager.

We learned this once after installing a small coastal wild-flower meadow including some thistles embedded in a residential zone. The next-door neighbor, Phil, told us,

“I hate it.”

We reposted, “But look, it’s like a Monet painting, full of colors, textures, and interesting stems even during the winter. Butterflies visit the meadow; look!”

“I hate it,” he repeated, “It’s full of thorns. I can’t play catch or Frisbee with my son there. It’s got bugs. I hate it.”

So human ecology perceptions of usefulness intruded on our cloistered world of botanists. And it came to stay.

So many practitioners of restoration ecology are drawn to this field by their cultural affections, the beauty and solace of a walk in the woods or fields. However, in a world of tight budgets, burgeoning human populations demanding space, and commercial interests always looking for a location to make a buck (or a yuan), the many values of our restored landscapes need to be communicated more forcefully.

Our understanding of the true value of healthy habitats is now collectively branded as ecological services. A series of professional reports is now available to us, providing a better understanding of the comprehensive values of restored landscapes (see references, below). Ecological services include production of materials for our communities, including food items, medicinals, wood for construction and fuel, oil, and freshwater (stored and cleansed by healthy habitats).

Ecoservices include regulating the quality of air and soil. Restored habitats also bind the soil, lowering erosion of fertile lands. They mediate the negative effects of flooding

and disease outbreaks. For example, in our urban areas trees lower the ambient temperature and raise humidity. Particulates and other pollutants can be removed from the air column by habitat stands. All plant growth involves removing carbon dioxide from the air and sequestering it in long-maintained carbon stores. Wetland habitats help control the disastrous effects of flooding and absorb energy from major storms. Habitats support a huge number of microorganisms whose physiological abilities break down many pollutants and can control pathogens. Habitat parcels also support pollinators necessary for so many of our crops (Buchmann and Nabhan 1996).

Any restored habitat also has supporting services for the many animal species that themselves help control insect pests and cycle critical nutrients. Any addition of restored lands represents a new stock of genetic diversity to increase resilience of landscapes in a world of changing climate.

Restored lands have many cultural services in addition to the aesthetic values which are most often cited. There is an increasing literature on the value of restoration for mental as well as physical health, a vital need of our communities. Many religions rely on natural areas for rituals and celebrations, but all people seem attracted to outdoor spaces for a greater sense of their place in the world. Together, these point to the great spiritual values of restored lands. Finally, and not to be minimized, an enormous percentage of today’s world’s tourism is to ecological destinations. Restored habitats consequently raise the economic status of many communities, an advantage that can be translated into many other civic improvements for local people. In 2008, *The Economics of Ecosystems and Biodiversity* (TEEB) estimated global earnings of almost US\$1 trillion from ecotourism. Restoration of land may properly be categorized as an investment, not a loss of funds.

Political and public support is needed for restoration progress. Governmental traction for restoration in New Orleans, LA took hold when the value of marshes in controlling storm surges was explained. In New York City, NY, restoration of woodlands was shown to reduce asthma in the city’s children. Restoration of meadows, pollinator nesting areas, in rural areas can increase crop yield in agricultural fields. Conservation and restoration of old pine forests in the Carolinas help persistence of the red-cockaded woodpecker, a rare species of regulatory concern. The editorial by Kris Decler in this issue details wide-ranging

actions by the European community, recognizing these many ecoservices of restoration. These advantages trump present aesthetics and solely recreational value for many restoration initiatives.

In the beauty contest of public opinion, each age chooses the values it deems most alluring, whether that is a habitat's ability to save energy, moderate climate, to support a rare or iconic species, or to recharge a troubled water table. By restoring a diverse and functioning community, we secure so many services by having a foundation of countless species interactions. A restored site can be, like Cleopatra, accepted as a beauty regardless of the current standard used for judgment.

*Age cannot wither her, nor custom stale
Her infinite variety.*

(Shakespeare, *Anthony and Cleopatra*,
Act II, scene II)

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