

Ecosystem Integrity

Campbell and Heck have defined ecosystem integrity as the soundness or completeness of the system and its existence in a state of being whole and unimpaired; the integrity would include maintaining the structure of the ecosystem and the function of the ecosystem. ¹ The importance of maintaining ecosystem integrity, and thus the ecosystem itself, has been explained in two fundamentally opposite ways.

To some, the existence of the ecosystem contributes to the sustainability of human society by maintaining the biodiversity of plants and animals which may be of economic utility to humans. (The original definition of “conservation,” more than a century ago during the settlement of the United States took this economic utilitarian view of nature without concern for sustainability). The other view is that sustaining “ecosystem integrity” and maintaining biodiversity are inherently and ethically valuable. This became the rallying cry of the “preservation” movement (as opposed to the “conservation” movement) over a century ago.

In either case, the problem is that due to the size and settlement of human population, it is increasingly difficult to find, let alone sustain, completely unaltered functioning ecosystems. This situation has led to the development of a new discipline, landscape ecology, both to study and design the arrangement, size and connectivity of landscape elements (such as forest patches, buffer zones, streams and riparian areas) to help sustain ecosystems.

Ecosystem Integrity: Up Close and Personal

The ways in which we interact with natural systems determine whether we will damage or protect ecosystem integrity:

- (1) Obey laws and regulations regarding fishing and hunting.
- (2) Be sure that waterfront properties are in compliance with local waste disposal regulations and do not unduly pollute waterways.
- (3) Take care that solid wastes (including plastics) generated while using campsites and trails do not pollute the land or waters; carry out non-biodegradable wastes.
- (4) Support the efforts of conservation organizations to preserve habitat and wilderness.
- (5) Consider adopting housing arrangements which reduce human and wildlife conflicts, including “clustered” housing, shared and rental housing and building location.

¹ C. Lee Campbell and Walter W. Heck, “An Ecological Perspective on Sustainable Development,” Chapter 2 in *Principles of Sustainable Development*, F. Douglas Muschett, Editor, St. Lucie Press, Delray Beach, FL, 1997.