

## **The Joy of Bioresources: Sustainable Forest-Recreation Connections**

Yu-Fai Leung <sup>a</sup> and Glenn Catts <sup>b</sup>

Forests have long-standing relationships with humanity beyond the material aspects. Recreation is an essential human need, and forests possess intrinsic values to support such a need in direct, authentic, and emotional ways. Quality recreation experiences can lead to a greater appreciation of bioresources and deeper support for forest conservation. The forest-recreation connections should be celebrated and sustained in this age of rapid social, environmental, and technological changes.

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*Contact information: a: Department of Parks, Recreation and Tourism Management, North Carolina State University, Campus Box 7106, Raleigh, NC 27695-7106 USA; Email: leung@ncsu.edu b: Department of Forestry and Environmental Resources, Campus Box 8002, Raleigh, NC 27695-8002 USA; glenn\_catts@ncsu.edu*

### **The Humanity-Bioresources Relationships**

Advancements in science and technology of lignocellulosic materials as exemplified by this journal are benefitting our societies with innovative renewable materials, services, and products. Indeed, the material relationship between the humanity and bioresources has existed as long as humanity itself, but sometimes we might overlook another long-standing humanity-bioresources relationship, which is through direct human interactions with forests (and other natural areas) where bioresources are produced. This latter relationship in our modern and increasingly urbanized societies is often manifested in the myriad recreational activities that take place in forests.

Recreation is an integral part of human experience and our quality of life. It is not just something we do for fun (which is important in and of itself) during our unobligated or leisure time; it is essential for our development as a human being. Benefits of recreation are multiple, including improved physical and mental health, development of self-esteem, restoration and renewal, and learning at the personal level. Recreation also helps improve family and social bonding, contributes to the economy, increases productivity, and increases commitment to conservation, just to name a few. Some recreational activities are viewed as appreciative, such as camping and hiking, while some others are consumptive, such as fishing and hunting. These and many other forms of outdoor recreation benefit from healthy forests.

### **Intrinsic Values of Forests for Recreation**

Forests are prime settings for outdoor recreation. Forest landscapes offer a spectrum of services from scenic quality to clean air and water. Healthy forests also sustain plant and wild life that affords many recreational opportunities. In fact many forests were protected centuries ago because of their hunting or fishing resources, though some forests and natural ecosystems were impaired by the introduction of game animals and stocking of fish for the same reasons. We identify four major intrinsic values of forests to humanity that can be experienced through recreation:

1. ***Forests as a universal symbol of rejuvenation*** – The history of our planet is one of birth, death, and rebirth. Forests are no exception. Long before humanity existed, catastrophic natural events leveled forests, but the resilience and diversity of forests soon refilled the previously disturbed landscape. This capability continually astounds humanity. A recent example is the discovery of an extensive past human civilization occupying the current “pristine” wilderness of the Amazonian rainforest. The recent success of the movie *Avatar* taps into this same vein of humanity (or Na'vi) being rejuvenated by living in harmony with the natural world.
2. ***Forests as cathedrals*** – Forests often contain some of the oldest and largest life forms on the planet, which in turn reminds visitors of their relative insignificance in the sweep of time and the overwhelming beauty and power of nature. A grove of giant sequoia in California or the great age of a sacred ginkgo in China naturally elicits reverence. All human cultures recognize special forest places. The structure of forests and their remoteness from civilization may make them quiet sanctuaries of introspection and reflection lit only by the glazing stars. Wind through forest canopies can be soothing, peaceful, and musical.
3. ***Forests as home to the wild*** – Forests are the last haven for truly wild creatures, a place where humans may no longer be at the top of the food chain. They can be regarded as the ancestral home of an uncivilized humanity. The biodiversity found in forests is a genetic treasure trove of historical adaptation, leading modern humanity to debate the inherent rights of all living organisms to exist on equal footing in appropriate settings. Although we may not all experience the danger of a wilderness existence first-hand, we all feel better knowing that somewhere on this planet such a condition exists.
4. ***Forests as amazing, sustainable providers*** – From Phoenician ship building with the cedars of Lebanon, to log cabins, railroad bridges, baseball bats, fruits, nuts, assorted foodstuffs, and pure waters teeming with fish, forests have provided humanity with sustenance throughout the ages. Modern discoveries reported in journals like *BioResources* continue to detail new uses of wood materials and their chemical byproducts. Entire industries based on eco-services have emerged to sequester carbon, reduce flooding, and to ensure perpetual cleaner air and water supplies. Forests continue to provide humanity with sustainable and renewable food, fuel, and shelter now and into the foreseeable future as one ultimate provider of bioresources.

### **Sustaining Forest-Recreation Connections**

Recreation provides direct, authentic, and emotional means to connect humanity with forests and their intrinsic values. The joyful experience of interacting with forests, in return, would lead to a greater appreciation of the human-nature relationship, the science of bioresources, and the imperative of forest conservation. Therefore, forest-recreation connections should be recognized and celebrated, but these connections should be made in a responsible and sustainable way so that recreationists are also good forest stewards. The importance of sustainable forest-recreation connections cannot be overstated, as recreation demands in forests continue to grow globally. The authentic and emotional nature of forest recreation experience is still unique and irreplaceable in this age of rapid social, environmental, and technological changes.