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CASE STUDY 1. Biodiversity Inventory

"Is this mushroom edible?" "Why is it blue?" "How many species are in the preserve?" Some of the questions from students challenge the taxonomic experts who are leading an All Taxon Biodiversity Inventory in Big Thicket National Preserve. One of many biodiversity inventories that are organized across the globe, Big Thicket attracts attention because the preserve was established explicitly with the goal of protecting biodiversity within a network of 13 forest fragments linked by water corridors. Located at the intersection of forest, savannah, prairie and coastal marshlands, the preserve harbors species otherwise typical of areas further away.

Experts lead groups of students and citizens in exploration trips in the Big Thicket. Most experts are university professors, specializing in a particular taxonomic groups of species, e.g. slime molds, fungi, bryophytes, frogs. Taxa experts can apply for small grants from Thicket of Diversity to conduct their field work. While in the field, researchers may stay at the Saratoga Field Research Station managed by Big Thicket Association, thereby attracting volunteers, scientists and educators to the preserve.

Many species new to the Preserve have been found and some new to science have been discovered. The number of new species, either previously unknown to the preserve or to science, is the primary yardstick by which the success of the Thicket of Diversity inventory is measured.

Stakeholder Perspectives

Family Heritage

"When I was a kid, we used to roam all through these forests." "The forests were different back then, open with tall trees." "My family used to run hogs in these forests and we would go hunting for squirrel, deer and raccoon". "At first I was against selling my family lands to the federal government, but now I am glad the lands are protected." Comments like these emerge during dialogue about biodiversity at the Preserve.

Although many local families have lived in the Big Thicket region for generations, their knowledge of biodiversity appears mostly limited to the species they had learned were useful as food, medicine or wood products. Spending money and time to identify and count obscure species, like slime molds, is something these families previously would not have considered worthwhile. However, their children are invited to participate through school field trips provided by interpretive staff at the preserve. Family-based activities in the outdoors are rapidly changing in regions where urban development expands into surrounding wildlands.



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Environmental Advocates

A coalition of environmental groups is networked in support of the Thicket of Diversity, including Big Thicket Association and The Nature Conservancy. Leaders within these organizations include county judges, business people, agency personnel, community leaders and land owners. These members represent both extractive and non-extractive entities and share many values with other members of their community. Because a significant portion of the leadership of these organizations lives in the region, the Boards have extensive local social networks.

Environmental advocacy groups within the broader geographic region, which includes major metropolitan centers in Houston and Dallas/Ft. Worth add to the political basis of support for conservation in the region. Thicket of Diversity lists as partners: 4 universities, two non-governmental organizations and the regional Gulf Coast Cooperative Ecosystem Studies unit. This broad basis of support has been recognized by grants from 3 foundations.

Agency Regulators

Within tight federal budgets, resources that can be allocated to species inventories are very limited. By partnering with non-governmental organizations, professional societies and faculty from local colleges in the region, the National Park Service is able to meet their mandates of monitoring and protecting biodiversity on the lands for which they are responsible.

That the Big Thicket lands are protected under the status of a "preserve" rather than a "park" is significant because the legislation provides for continuation of hunting and trapping activities. From one perspective, this diverts resources to law enforcement and management of the hunt. From another perspective, it is a mechanism for reducing the potentially negative effects that an over-abundance of deer and hogs might have on sensitive populations of rare species.

Development Advocates

Economic development within the region is a high priority issue as extractive industries (i.e. oil and timber) peaked and moved elsewhere. Counties in Southeast Texas are actively seeking to attract industry that will reduce the unemployment rates and increase tax revenues. One perspective is that quality of life can be a major selling card for the employees of high technology and service industries. Statistics about the total number of acres protected in the region and the phenomenal number of species therein, provide the "gee whiz" evidence that the region provides a high quality of life in terms of natural beauty and opportunities to escape the bustle of cities.

Sources

Thicket of Diversity: <http://www.thicketofdiversity.org/> (Accessed February 23, 2010)

All Taxa Biodiversity Inventory Alliance. <http://www.atb alliance.org/index.shtml> (Accessed February 23, 2010)

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