

Amanda Desormeaux

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Essay: "The Important Threats to Biodiversity in Central Florida with Follow-up Considerations Toward Implementing Realistic and Reasonable Solutions"

Florida is one of the most biodiverse areas in the world, home to over 1,500 endemic species. Not only is this biodiversity inherently valuable, our diverse natural resources support three major economic sectors of the state: fisheries, tourism, and recreational activities. However, this biodiversity hotspot is also one of the most threatened areas in the world. Climate change, sea level rise, invasive species, changes in water quality and quantity, urban sprawl... the list goes on. How can we mitigate just one of the many assaults on our abundant biological resources? More importantly, how do we do this in a realistic and reasonable way? These are questions I often ask my class of environmental science undergraduates during our module on biodiversity. The answer is surprisingly simple once we see the common thread that links all the major threats to biodiversity in Central Florida.

Invasive species flourish in our warm climate, but displacement of native species can be avoided when land is managed properly. Changes in water quality and quantity are driven by land-use change throughout the state, but can be mitigated by the protection of vulnerable areas within springsheds and watersheds. Growing urban populations result in habitat encroachment when growth is in the form of urban sprawl, but this can be avoided when urbanization is prohibited on critical habitat. Climate change drives northward movement of both plant and animal species, but maintaining habitat connectivity can support this migration while minimizing negative human/wildlife interactions. Loss of habitat area/connectivity and insufficient resources for land management are the drivers of all of these threats, making habitat conservation and management the most reasonable solution.

This solution is also realistic, as Florida has a history of land conservation and there are over 10 million acres of conservation land throughout the state. Funding for acquisition of land that protects critical habitat is available through the Florida Forever Act and various state agencies are involved with the management of these lands. In addition to the political mechanism to fund the protection of wildlife habitat, there is strong public support across the state for these types of programs; this is exemplified by the recent tax increase passed by Alachua County voters to fund the purchase of public conservation land. The solution is not the development of policy that funds habitat protection and management, rather the implementation of existing policy that adequately supports the efficient acquisition and management of conservation land.

We are unique in Central Florida in that all of our "quantity" debates (e.g., quantity of species, quantity of water, quantity of natural resources) are centered around environmental protection. It is never the question of sufficient resources to support human activity, but sufficient resources to concurrently support human activity and protect the environment. We have a responsibility to protect the abundant natural diversity that surrounds us in Central Florida, but this will require that our political representatives uphold publicly supported legislation that funds the acquisition and maintenance of conservation land.