

Liquid Assets

The Rare And Enchanting Treasures Of Coastal Dune Lakes

Matthew Porter 8-2009

So rare, only a few hundred exist in the world -- but it's not an animal.

So delicate, they can only be found in certain specific conditions -- but it's not a plant.

They are coastal dune lakes, a phenomenon occurring when a freshwater lake sits immediately adjacent to an ocean, separated only by a coastal dune. Nestled just within this ridge of sand (ranging from a few feet to more than seventy feet in height) and slightly above sea level, these unique ecosystems are fed by rain and sometimes creeks. These neighboring bodies of will periodically exchange water, depending on conditions. When dune lakes fill up, they burst through the dune barrier (called "pop out") sending a river of fresh water rushing to the ocean. Alternately, during a hurricane or heavy winds and/or when the lake is low, ocean water can go rushing into the lake, an event known as "flush in."

Coastal dune lakes are known to exist in just a handful of places-- Australia, New Zealand, Madagascar, the Pacific Northwest, and Florida's Walton County in the Panhandle region-- making these little-known marvels a treasure for nature lovers and a must-see for eco-tourists.

It is the coastal dune lake's potent combination of rarity and beauty that drew documentary filmmaker Elam Stoltzfus to them. Stoltzfus recently directed and produced a short film called *Coastal Dune Lakes: Beaches of South Walton*. The award-winning documentary explores the unique biodiversity of coastal dune lakes in the Florida Panhandle and details efforts of locals to protect them.

Building on the success of his short film, Stoltzfus now seeks sponsorships for an hour-long documentary called *Coastal Dune Lakes of the World*. The new film will contrast the condition of coastal dune lakes in Northwestern Florida with those in New Zealand and Australia. The documentary will explore the habitats of increasingly elusive and/or endangered plants and animals and illustrate the importance of preserving the ecosystem around the perimeter of coastal dune lakes. *Coastal Dune Lakes of the Word* will also showcase a comparative study of each region through research, threats, and current management practices.

To learn more about opportunities to contribute to the making of the documentary, visit www.CoastalDuneLakes.org.

A behind-the-scenes look at pre-production of *Coastal Dune Lakes of the World* reveals a picture of international cooperation. Stoltzfus plans to establish a partnership with scientists and historians from New Zealand and Australia in gathering research and planning his documentary. Though from different cultures, Stoltzfus and these advisors are united by their appreciation of the beauty of coastal dune lakes.

Stoltzfus's passion for capturing the beauty of the natural world on film has been previously expressed in numerous award-winning films including *Big Cypress Swamp: The Western Everglades*, scheduled to air nationally on Public Television stations in September.

The native Pennsylvanian credits his Amish-Mennonite upbringing for instilling in him a love and reverence for nature.

"Being outdoors was just an everyday experience on the farm," says Stoltzfus. "The creeks and woods and connecting with the soil was a part of life."

But can that connection to coastal dune lakes be maintained? As Stoltzfus's documentary details, the tenuous existence of coastal dune lakes is under constant threat worldwide from both natural and manmade forces.

Natural threats to the ridges that define coastal dune lakes include erosion, an ever-present concern, but particularly during Florida's annual hurricane season. But some have taken steps to fight nature with nature. Topsail Hill Preserve State Park is located 45 miles west of Panama City, Florida and encompasses 182 acres, including three major coastal dune lakes and two smaller ones. To protect the sandy buffer between the lakes and the ocean, 500,000 sea oats were planted. This vegetation will help maintain the integrity of the sand and dunes against the wind.

Development also factors into the future of coastal dune lakes. While the value of beachfront property has dropped in some areas, strong demand for development along the coast remains. The poetically-named town of WaterColor, a development located on Western Lake in Walton County, has established a no-construction buffer around their coastal dune lakes, but this is the exception rather than the rule. Additionally, grassroots groups have formed, giving a greater voice to citizen-based organizations interested in the preservation of coastal dune lakes.

At present, coastal dune lakes are considered as 'globally imperiled' by the Florida Natural Areas Inventory, a non-profit organization administered by Florida State University.

And making the issue even more complex, coastal dune lakes constantly evolve. These emerging, subtle changes have been detected only through years of close and constant observation. Further, each coastal dune lake also has its own characteristics and behaviors. While Western Lake exhibits the normal 'pop out' and 'flush in' pattern, nearby Eastern Lake has functioned at times like a tidal estuary. However, due to man's

intervention, it is now under distress, becoming closed off and stagnant, filling up with nuisance grasses and algae pads.

“The more we learn about coastal dune lakes, the more we discover there’s more to learn,” he says. “What we hope to do with the documentary is combine education, information, and entertainment about these rare and mysterious bodies of water on a global level. It’s a perspective that really hasn’t been seen before.”

The question remains, will Stoltzfus’s new documentary be a celebration of man living in balance with his environment worldwide or a testament to a lost treasure?