

(Thanks to Board member Rae Ann Wessel for taking Kate out for the tour and working on this story)

BonitaNews.com

Losing its Curve Appeal

Once Crooked, River's Straight path Hurting Ecosystem, Group Says

By Kate Spinner

Tuesday, April 18, 2006

Overhung with oak branches that twist almost as much as the river did a century ago, oxbows curve off the Caloosahatchee like scenic routes, inserting the regions past smack dab into the present.

Those little diversions in the straightened and widened river are remnants of the original Caloosahatchee River - narrow, knotted and barely navigable. Now, like a historic preservation project for wildlife, a movement is afloat to revive the oxbows and add habitat to a river that functions more like a nautical highway than an ecosystem.

"When you get back to that braided river channel it creates a bunch of different habitats," said Paul Gray, an Audubon of Florida biologist with expertise on the Lake Okeechobee watershed. "Basically, when you have a canal all you have is one habitat."

The Caloosahatchee has been too altered to convert back to its natural state and its deep channel is too valuable a link in the Okeechobee Waterway, which leads from the Gulf of Mexico to the Atlantic Ocean, to replicate its former course. But local environmental groups and the South Florida Water Management District agree restoring the abandoned jogs in the river would improve water quality and habitat for fish, birds and bugs.

How a river became a canal

One day last week, Rae Ann Wessel steered Ms. Muggins III, a 1958 Orlando Clipper about the size of a rowboat, across the wide channel of the Caloosahatchee into a quiet oxbow just west of Alva and east of Spanish Creek.

"When we come into the entrance, you can imagine 1880," Wessel said. The boat slipped into the historic river bend, beneath a canopy of thick oaks cloaked in Spanish moss and past a shoreline crammed with cabbage palms, water hemlock and climbing blue aster.

The old river stretched maybe 100 feet from bank to bank, and while it flowed west, it also twisted north and south, said Wessel, a biologist and environmental consultant, who is also a member of Riverwatch, a local environmental group pushing for oxbow restoration.

For nine years, Wessel led historic tours of the river's oxbows with the late Charles Edgar Foster, who knew the Caloosahatchee before it became the Okeechobee Waterway.

Before the U.S. Army Corps of Engineers dredges made their mark on the river, the Caloosahatchee bent 102 times along its 64-mile journey. Now the river takes 26 generous curves.

When the Corps converted the river into a conduit for draining Lake Okeechobee to sea in the 1930s, the agency cut a line through all those curves. Dredges dug through the bends, creating dome-shaped islands where rogue waters continued to pass around land that once acted as the shore.

In the 1950s, the Corps revisited the river to make more room for emergency drainage of Lake Okeechobee. The agency more than doubled the Caloosahatchee's width, creating about 35 of those straight-edged islands. In a few cases, water still passes around those pieces of land. In other cases, the oxbows have become plugged by sediments and invasive plants.

Back before the Corps' dredges arrived, boat captains struggled to travel the Caloosahatchee, employing ropes as spring lines to wend through the waterway.

Near Labelle, the river took so many tight jogs that it became known as 4-Point Rope Bend.

Another infamous bend was Devil's Elbow, which still exists as a circular loop off the river's north shore, near the Franklin Lock in Olga.

As though the twists and turns weren't enough to frustrate early boat captains making their way upriver, waterfalls spilled over rock outcroppings as the river approached the defunct Lake Flirt, a few miles north of modern day Labelle.

When Hamilton Disston, the first man to wage an all-out assault on the impenetrable marshes of south Florida, arrived on the Caloosahatchee in 1881, he took dynamite to those troublesome waterfalls. Disston's mission was to drain 4 million acres of Everglades's saw grass marshes and pond apple swamps that he bought from the state for \$1 million. Removing the rapids allowed him to steer his dredge up the river from Fort Myers to Lake Okeechobee, where he widened and deepened an old canal created by the Mayaimi Indians.

Disston's work connected Lake Okeechobee to the Caloosahatchee's headwaters at Lake Hicpochee and dried up the land and the lakes in between. The diverted flow shrunk Lake Hicpochee and eventually eliminated Lake Flirt, Lettuce Lake and Bonnett Lake. As much as the dredging created arable land around Lake Okeechobee, it also caused flooding down river by introducing year-round flow from the big lake.

Hurricanes and floods in the 1920s and 1940s prompted the Corps to turn the river into a flood valve, equipped with locks and dams in Moore Haven and Ortona. The Franklin Lock entered the picture in the 1960s and set an artificial boundary on the river's estuary, which once extended all the way to Fort Denaud during the dry season.

With a faster and deeper river, which rarely bends enough to create shallows, or littoral zones, for water lilies and sedges to take root, the Caloosahatchee has lost nearly all its bird and fish habitat between Lake Okeechobee and the estuaries.

"Out here there's no littoral zone, no place for the wading birds," Wessel said, pointing to the nearly vertical walls of spoil sand lining the Caloosahatchee's banks near Alva. "There's no place for the manatees; there's no refuge for feeding their young. It's just exposed."

Conflicting demands

Wildlife needs habitat along the Caloosahatchee, but people need the river, too.

During the rainy season, the river's straight course, and its locks and dams, allow the swift lowering of Lake Okeechobee. Last year, the Corps and the water management district sent 696 billion gallons of water down the Caloosahatchee River from Lake Okeechobee - mostly for flood control purposes.

Like the river, the lake has also been severely altered, shrunken by about a third and contained with an earthen levee. If the lake water raises too high, the levee could crumble and send flood waters into communities and farm fields.

The river also serves as an intercostals waterway used by recreational anglers, tourists with expensive yachts and commercial shipping. The river needs to remain deep and wide for ease of navigation.

Parts of the river are also used for irrigation and drinking water.

Demands for flood control and navigation put the river in an entirely different category than the Kissimmee River, which drains a watershed from Orlando south to Lake Okeechobee.

Also in the name of flood control, the Corps straightened the Kissimmee from a 103-mile meandering river to a 56-mile canal. Almost as soon as the Corps finished straightening the Kissimmee in 1971, scientists noticed the loss of wildlife habitat and degraded water quality.

But unlike the Caloosahatchee, efforts are under way to bring back most of the original Kissimmee. The district recently finished buying 120,000 acres to plug up canals and reflood the Kissimmee River's original curves.

That scale of restoration is impossible on the Caloosahatchee.

"The big difference is that the Caloosahatchee is a federal navigable waterway," Wessel said. "That designation requires that it be managed as a cross-Florida ship channel."

Wessel also said the curves of the Caloosahatchee were much different than the long bends of the Kissimmee.

But removing silt and sediments from those fragments of old Caloosahatchee would at least improve water quality and bring back habitat, Wessel said.

Re-engineering the river

Last year the water management district spent about \$450,000 to restore a single oxbow on the Caloosahatchee River. The river remnant, at Fort Denaud in Hendry County, had been closed off by a small land bridge and filled in with silt and vegetation.

Steve Sentef, lead regulatory representative specialist with the water management district's storm water division, said recreating an abandoned river bend is more difficult than it sounds.

Equipment has to be brought in by barge and all the removed silt has to be contained and disposed of as slurry.

Wessel directed her boat into the calm waters of the restored Fort Denaud oxbow. Live oaks shaded the waters and bulrush and spatterdock grew along the banks. The plants will keep the water cool and foster the growth of insects that fish will devour. The emerging plants also provide a space for apple snails, a favorite food for endangered snail kites, to lay eggs.

The water management district is working on restoring a second oxbow further up the river, near Crawford Ditch. The project will take about 18 months and about the same amount of money.

Sentef said restoring oxbows won't fix the river but will provide shelter for young fish, homes for turtles and feeding areas for wading birds. By capturing water and slowing it down so aquatic plants can take root, the restored oxbows also help filter out pollutants before they reach the Estuary and the Gulf of Mexico.

Wessel said she hopes the water management district will continue restoring the bends in the river. She also hopes to see Lake Hicpochee reflooded.

Gray said restoration scientists conducted extensive experiments along the Kissimmee before figuring out what features of the river could be brought back without ruining its value as a waterway and water supply source. He said similar tests could work in strategic spots along the Caloosahatchee.

Turning the river into a healthy system will require a lot more than putting a few bends back on the fringes of the main channel, however.

"The problem is so big we have to do a whole lot of different things," Gray said.

Connecting the river directly to the lake eliminated acres of marshlands that slowed the flow of water and filtered out sediments before they reached the river. The river runs faster now and carries dirtier water. The only way to change that is to clean Lake Okeechobee and create a combination of marshes, reservoirs and restored oxbows and add better pollution control throughout the watershed.

"We certainly can work on those oxbows," Gray said. "There are probably a zillion opportunities like that. I mean why shouldn't you guys have as beautiful a river as possible."