

Pavanne for Sebastian

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Sebastian began life as a simple village named for a saint, on the east coast of Florida just south of the frost line. Three hundred families lived there on the fish they caught. But after 1893, when Mr. Flagler's railroad arrived, everything changed. What had once been a local fishing population feeding itself became a commercial entity with trains linking Florida to the north. With a new ice house, fish could be shipped as far north as the Fulton Street Market in New York City. The resulting prosperity triggered growth that soon overwrote the culture of the town. And so the pavanne for Sebastian began, stately but relentless steps. It's a dance we in Florida know all too well.

Despite the inevitable growth in Sebastian, the Indian River Lagoon still has more species (over 4,000 not counting humans), than any tidal estuary in the country. And it still produces 90% of Florida's clams, some cultured by fisherman displaced by the gill net ban, others just harvested from the wild—and 15% of all the clams sold in the US. And in the subtropical maritime woods that border it, butterfly orchids still extend their thin tongues among the resurrection ferns. With all the sad tales of lost places, surely this is something to be celebrated.

Sebastian Inlet State Recreation Area, which takes in part of the lagoon, as well as three miles of beach and the inlet it was named for, forms a long and narrow but substantial—1,000 acres—park. Before we set out in our canoe, Terry O'Toole, a substantial ranger with a radiant smile, takes me through the RV park to a fenced-off area which adjoins the lagoon. It looks like wasteland to me, but its balding and scruffy expanse will be home to the least terns' next nesting season. For hundreds of years, these birds have laid their barely-covered eggs on sand, but lately, displaced by dogs, cars, and curious children, they've taken instead to nesting on the gravel roofs of strip malls. But mall roofs don't serve the terns well either. For one thing, the asphalt gets so hot that many of the eggs don't hatch. For another, it takes only one raccoon to

clear out an entire nesting ground. The upshot of all this is that 80% of all least terns now nest in set-aside areas like this one. Terry says that the park service will return it to beach-like conditions by next season by displacing the vegetation that's been trying to take it over.

When Terry's made his point, we drive to a marina on a part of the lagoon called Campbell's Pocket, a side room as it were, patronized mostly by otters, alligators and manatees. We repatriate a canoe, and in only a few minutes of paddling, we're surrounded by mangroves. The ingenuity of mangroves is rather thrilling. They can survive in brackish waters like this lagoon. But they can do better than that. They can survive in salty soil, even where it's saltier than the ocean—which can happen when it doesn't rain. In this part of Florida, mangroves grow inland, in lagoons and estuaries, but in parts of the keys, the Caribbean, and South America, they grow right on the ocean, becoming salt forests, towering as high as eighty feet.

Most of us think of sandy beaches when we think of a coast. But land has many ways to meet the sea. Defiantly, with massive cliffs and huge rocks. Gracefully, with dunes sloping down to reaches of sand that sigh into the water. Vulnerably, nakedly, from flat land to flat beach. Or stubbornly, like coastal mangroves holding onto every deposit of sand with intricate root systems that resemble nothing so much as neural networks.

Mangroves have two basic threats to their survival. The first is obvious: salt. The second is more subtle, caused by the oxygen-deprived environments where mangroves choose to live. This latter threat is the fault the bacteria and algae that, by disporting themselves in the mangrove's own leaf litter, use up most of the oxygen that would otherwise have been available to them.

Different mangrove species cope with these challenges differently. The red mangroves that live closest to the edge of the water, drop prop roots on top of which the leafy part of the tree sits, looking something like a fern on an ornate Victorian plant-stand. The prop roots' job is to collect oxygen from the air and transmit it to the tree. They're tough on the outside so, whereas other mangroves have had to develop mechanisms to excrete salt, prop roots just don't take it in. At the same time, the waxy coating on red mangrove's leaves conserves the fresh water they get from rain and dew.

The black mangroves that inhabit the next neighborhood in from the water have aerial roots too, but rather than dropping them, they send them upwards the way cypresses send up knees. But these roots don't look like knees, they're thin and look like straws, and their job is to collect oxygen and transmit it back to the tree. In other words, black mangroves breathe through their roots the way movie fugitives hiding in rivers breathe through reeds. Black mangroves are appropriately named. You can pick them out in a crowd of vegetation because they have the darkest trunks. And while, you'll remember, red mangroves are made not to take in salt at all, black mangroves do take it in but then excrete it through slits in their bark and leaves.

The innermost mangroves, the ones that live in the luxury neighborhoods, the mud above the high tide line, are the white mangroves. Since their main challenge isn't oxygen, they don't need aerial roots. On the other hand, every leaf is equipped with two glands whose job is—like the slits on black mangroves—to eliminate salt. Mixed in with the mangroves in the Sebastian shoreline, you can see mangrove wannabes, buttonwood trees whose pursed white flowers look like the kind of closings that might have adorned the front of a lady's shirtwaist. Buttonwoods are almost the only not-mangroves that can handle this environment.

Mangroves are beneficial to more than themselves. They send water out cleaner than it came in. They buffer the shore against wind and tidal surge. They make habitat for all kinds of birds and insects. And—this is especially important—they shelter the young fish that feed on the plankton that eat the algae and bacteria that feed on dropped leaves. Juvenile snook, ladyfish, jacks, redfish and tarpon are common in the complicated waters of mangrove stands. In fact, Terry tells me, almost three-quarters of the fish we catch have survived to adulthood by spending time only in an estuary like this.

We've set off in a rain so light it almost doesn't get us wet. The sky, though, is dark and gathering, and in the distance swirls one of those black roses that means a storm. We can also see several shafts of darker light that tell us that a few miles from here, real rain is falling. Still, because I have only one day in this magical place, I'm not about to turn back—and Terry is kind enough to humor me in this. We paddle into choppy wavelets that pitch our canoe from time to time, as if the lagoon were annoyed with us.

And the lagoon isn't all that's annoyed. A great blue heron squawks indignantly as we pass, like a man roused from a nap, then manages itself slowly into the air. The heron is in the minority here since most of the wildlife around us doesn't seem to be bothered. Mullet are jumping their flat silver, not in forward leaps the way fish will when something's chasing them, but straight up, as if they were doing it out of joy. And all around our canoe, brown pelicans are diving and coming up full. We pass, in the course of just a few minutes of paddling, a tri-colored heron, a snowy egret, and a little blue heron, who's playing statue on mangrove branches while waiting for something edible to swim by. Six or eight cormorants ornament a branch dropped by some storm into the middle of the lagoon. The branch sticks up because the lagoon is so shallow averaging only three feet deep here. The cormorants aren't active now but they're famous as fishing aces. And sometimes they spear their food so hard they have to bang it on a tree to jar it loose so they can eat it.

Cormorants (and anhingas) are known for having no water-repellent on their feathers, which explains why you see them perched on limbs with their wings spread. And although some birds, like sparrows, puff up in the winter to minimize the cold, anhingas and cormorants actually shiver. I haven't seen any anhingas today. Nor eagles, though I know there are some here. Ospreys, on the other hand, seem to be everywhere. And, like the pelicans, they've gotten lucky. We see one drop its fish to face it the other way getting it more aerodynamic for carrying home.

Some of the birds where we are now have a completely different dinner strategy than the ones in the lagoon. On our way to the Pocket, we passed eight or ten wood storks and a crowd of gulls, all waiting for handouts from the lineup of men cleaning fish in the park's sinks. Since the flounder were running, the birds were making out like bandits.

The lagoon to our left opens out before us, 156 miles long and in some places as much as five miles wide. Still, a good deal of it feels intimate because it's dotted with islands, many of which were formed because of the way mangroves reproduce. If they dropped their seeds the way other trees do, they'd die from the salt; so they hold onto them until they're ready to root (at this point, they're called propocules and resemble good-sized bamboo

shoots). Then, their parent trees drop them into the water and they drift until they wash up on some shore. That doesn't have to happen right away. The propogules can survive without rooting for as long as a year. Then, as soon as they find themselves on land, they dig in, which keeps the sand around them from washing away. As more sand washes up, they spread into that. Let some time pass and you have an island.

We paddle between two of these islands and beach our canoe on a patch of sand on the bigger one. As soon as we step out of the canoe, the rain, which had stopped for awhile, intensifies for maybe three minutes then changes its mind. The island we've landed on is on the verge of being overrun by Australian pines, which are as virulent as they are pretty. They reproduce wildly and are so acidic they kill everything that tries to grow around them. Left unchecked, they're capable of choking out the native species like sea grape and smilax that otherwise would have dominated here. We also come across another invasive—a Brazilian pepper plant which is decked out this November with the red berries that make some people call it Florida holly. But that's a misnomer since pepper plants aren't Floridian. And in most natural areas of Florida, people in the know pull the berries off them because if they don't, every single one will produce another plant.

Our little island is rimmed with mangroves. There's an arched gap in them, a secret place that would be perfect for a tent. I imagine falling asleep here, lulled by the washing water, to be woken maybe by owls, seeking each other in the dark. I imagine a million stars. When I come to, I see that Terry's pushed our canoe into the water. I help him turn it and, loving the wet around my calves, I wade to the front and climb onto the metal seat. The wind that was behind us has shifted while we walked on the island, so now we're paddling into it. It feels good to use my muscles.

One of the attractions of this particular park is that it adjoins the very first wildlife refuge in the United States, a three acre island that was set aside by Teddy Roosevelt. How this happened has to do with the feathers that were in such high demand during the eighteenth and nineteenth centuries for the hats of fashionable women. In 1900 an ounce of feathers fetched the same money as two ounces of gold. Plume feathers were especially desirable, but

in their absence any feather would do, so treasure-seekers were killing nearly everything with wings, with the catastrophic result that by the turn of the twentieth century there were no successful rookeries on the east coast.

In the middle of this madness, a German immigrant named Paul Kriegel, who lived in Sebastian, decided to take up for the local birds. When he heard gunfire coming from Pelican Island near where he lived, he would go out in his boat with his shotgun, and persuade the hunters to leave. Fortunately for the birds, Kriegel happened, through a friend of a friend, to have contacts in Washington. At the top of this chain of contacts was the president, Teddy Roosevelt, who responded to the news of the birds' plight by decreeing Pelican Island a wildlife refuge and appointing Paul Kriegel its warden. By this turn of events, a Sebastian man became the first warden in the national park system. And Kriegel took his job seriously. The story goes that some years later, when he rowed out to Pelican Island to see who was disturbing the birds, he discovered that the offenders were the current president, Warren Harding, and some friends. Kriegel wasn't impressed. He chased them off.

Of course, making Pelican Island a sanctuary wasn't by itself enough to have saved Florida's plumed birds from extinction. Their defenders managed to pass laws to protect them, but those laws wouldn't have rescued them either, because the profit motive was stronger than they were. What did finally bring the birds back from the brink was the women's suffrage movement. The demise of the fashion for plumes began with an editorial. When women were first agitating to get the vote, a newspaper in Chicago printed a piece opposing their campaign by saying that people who went around with feathers on their heads, clearly advertising their status as "bird-brains," had no call to be taken seriously. And not long after that, the bottom dropped out of the feather market and Florida's bird populations began, slowly, to recover. And they have been recovering, with some exceptions, ever since.

Even though the population around Sebastian is still expanding in an alarming way, there is also something worth celebrating here, and that's the current state of bird affairs on Pelican Island. In 1996, the owners of nests there consisted of the following: 150 wood storks, 85 brown pelicans, 40 snowy egrets, 30 double-crested cormorants, 20 cattle egrets, 12 green terns, 10

tricolor herons, 5 little blue herons, 5 black-crowned night herons, 5 cattle egrets, 4 reddish egrets, 2 great blue herons, and one American oyster catcher. And there's more. On a single night in 1997, a group of birders ringed the island and counted, flying in, the following: 2,748 double-crested cormorants, 612 white ibis, 500 laughing gulls, 316 white pelicans, 305 cattle egrets, 229 tricolor herons, 210 snowy egrets, 170 brown pelicans, 58 great American egrets, 52 little blue egrets, 25 wood storks, 22 great blue herons, 10 ring-billed gulls, 4 reddish egrets, 3 mottled ducks, and 2 American oyster-catchers. Imagine all this abundance on three acres. It reminds me of the first time I was taken to the Fakahatchee refuge, and so many birds lifted off around our jeep that I felt as if we were in a parade being showered with confetti.

As Terry and I pull by the last island, the child in me says not to stop paddling, ever. But I stop anyway, of course I do, because I know that this afternoon with its black skies is precious precisely because it does end, the way mortality makes us humans more divine than the gods. The wind catches in my hair as I lift the front of the canoe and help Terry set it on the rack. It's the wind I take home.