



Florida Black Bear National Scenic Byway Newsletter

One positive thought in the Morning can change your whole day.

Lettuce, Greens, and Manatees



Officials in Florida had to take drastic steps this winter to help save Florida's Manatee population from starving to death. Typically, feeding any wild animal is discouraged, but more than a thousand manatees died in 2021, almost 15 percent of the states total population, the highest recorded number of manatee deaths in decades. Many of these creatures died of apparent starvation and feeding them was a last-ditch agency effort to help sustain the population. "The consequences are too dire not to at least give this a try," said Patrick Rose, Executive Director of the Save the Manatee Club.

The US Fish and Wildlife Service's efforts to feed these lovable sea cows started in December 2021 at a single location in the Indian River Lagoon. USFWS, along with State wildlife officials and in cooperation with Florida Power & Light Corporation, established a temporary feeding station at the utility's Cape Canaveral Clean Energy Center in Brevard County.

The energy center is a critical stop-off point where manatees congregate to enjoy the facility's warm water discharge, as they move south during winter months.

This winter, officials distributed roughly 20,000 pounds of vegetation, primarily romaine and butter leaf lettuce a week. The greens were distributed in a controlled manner using something similar to a conveyor belt to deliver food to the hungry Manatees. FWC reported an average of 350 manatees a day were visiting to eat the greens being offered at this temporary field station.



While each year hundreds of the slow-moving sea cows are struck by boats, death from starvation outnumbered watercraft collisions in 2021. Manatees rely mainly on seagrass beds to sustain them throughout the cold winter months, but sadly many of the Lagoon's beds have been smothered or lost as a result of



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Lettuce, Greens, and Manatees, Cont

Pollution. Fertilizer runoff, discharged wastewater, and climate change caused thick algae blooms that blocked out the sunlight, eventually killing the seagrasses that is needed by the manatees to survive.

In early December 2021, the *New York Times* reported that many of Florida's usually chubby manatees have ribs visible through their skin and struggle to swim normally while the . *Washington Post* reported that the majority of Florida's manatees are malnourished and are struggling to find the food they need to survive. Even with this new feeding program, biologists feared hundred more manatees could die of starvation during this year's winter season.

A healthy Florida manatee can grow to be ten feet and weigh thousands of pounds, which means they need lots of edible vegetation to survive. A manatee's diet consists of 100-200 pounds of seagrass per day. Multiplying that by the number of sea cows in Florida's waters provides a hint at the quantities of plant life needed to maintain a well-fed population of manatees.

Florida manatees were among the first animals to be listed as an endangered species when the federal government protected them in 1967. That increased protection helped manatee numbers rebound from around 1,000 manatees to 8,000 individuals by 2017—enough to have their conservation status downgraded from "endangered" to "threatened."

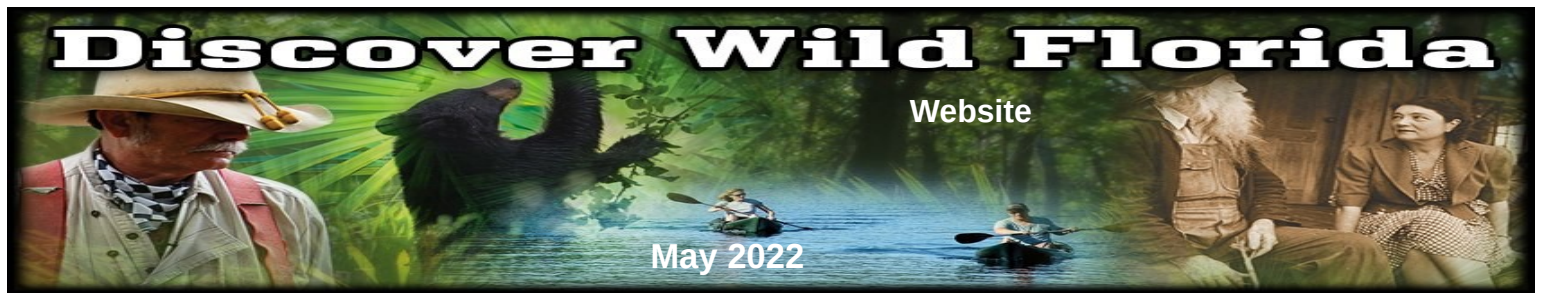


In 2021 a record 1,017 manatees had died as of November 19, nearly twice as many deaths as previous years, according to state figures. By comparison, only 593 deaths were recorded in 2020, leading some of the state's elected officials to push to restore the manatee's endangered status.

"At this point in time, we have been successful. Manatees are eating the romaine," reported Ron Mezich of the FWC. "We are exposing large number of animals to this food source and we are making a difference."

Wildlife officials emphasized that they'll be the ones doing the supplemental feeding, noting that individuals should not start tossing lettuce into manatee gathering spots. Giving food to wild animals can disrupt migration patterns or spread disease, for example, so it's best to leave it to the experts.

Manatees can be seen in several places along the byway including Silver Springs, and Silver Glen.



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Lightening – A Shocking Experience



Everyone knows, Florida is the lightening capital of the world...Right? But do you really know what lightening actually is? A weather expert will tell you that *lightening is an electrical charge caused*

by imbalances between storm clouds and the ground, or within the clouds themselves. They'll also tell you that most lightening occurs within the clouds and if you see a distant bolt that lights up an entire cloud base, it's called "sheet lightening". Other visible bolts may appear as bead, ribbon, or rocket lightening.

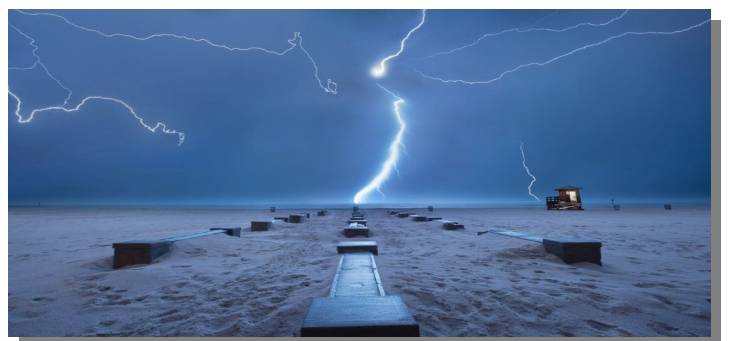
So what do you think - does lightening travel up or down? This could be somewhat of a trick question because technically, lightening does both. This phenomenon occurs because there is a difference in charge between the storm cloud and the ground and there is such a thing as positive lightening which travels in reverse, going from ground into the clouds.

While a lightning bolt seems to just suddenly happen in the blink of an eye, the anatomy of that bolt actually includes several steps. First the base of the cloud sends down a little electric discharge, called a **stepped leader**. It is called a stepped leader because it descends to the ground in steps

of about 50 yards each. This process is extremely fast and almost impossible to see with the naked eye because each step is less than a millionth of a second long. Hence, the interval between the steps is approximately fifty millionth of a second. This process can only be observed with the assistance of extremely quick-exposure cameras. The entire step leader generally moves about 75 miles per second towards the ground and has a typical trip duration of about 20 milliseconds long.

So now that I've peaked your interest – you need to next know that the carrier for the negative charge is the stepped leader. As it nears the ground, it induces enormous quantities of positive charges in the earth, especially at the tips of tall objects. Because opposites attract, the stepped leader and the negative charge at the ground reach towards each other and quickly meet. The path from storm clouds to the surface is complete and the charge can move.

Because the cloud is filled with negative charges, it has a lot to offer this newly created discharge path.





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Lightening – A Shocking Experience, Cont

This charge quickly moves from being distributed throughout the cloud to being concentrated at the point where the stepped leader first dropped from the cloud, onto the ground or an elevated object. This discharge is called the **return stroke** and is what we think of when we hear the word "lightning."

The return stroke takes around 100 millionths of a second to reach the ground. The immense flash generated is enough to leave an afterimage in our eyes for seconds at a time, giving us the illusion that the lightning flash is longer than it really is. In reality, our eyes cannot resolve any of the steps involved. We only see the final product — a lightning bolt. So the next time you're enjoying an afternoon thunderstorm from a distance, you'll better appreciate how that bolt actually works.

Florida In the Know

Territorial Period(1821-1845). Spain gave Florida back to the United States. Andrew Jackson became governor, and Florida became an American territory. Tallahassee was chosen as the capital because it was about halfway between Pensacola and St. Augustine. Two of the three Seminole Wars took place during this time. Many Florida towns have "Fort" as their first name derived from the forts built during these wars.

Florida Development(1878-1926). This was the era of steamers, railroads, dredges, swamp reclamation, new towns, cities, developments, and highways. Henry Flagler built his Florida East Coast Railway down the Atlantic coast and finally reached Key West in the Florida Keys in 1912. Henry Plant extended his railroads through Central Florida to West Florida and Tampa Bay. The citrus industry prospered until the Great Freezes of 1894 and 1895. Florida became a major cattle raising state. The state was doing well in the early 1900s, and the 1920s saw a major land boom in Florida with many new towns being created.

1945 - Florida became the twenty-seventh state in the United States on March 3, 1845. William D. Moseley was elected the new state's first governor, and David Levy Yulee, one of Florida's leading proponents for statehood, became a US Senator.

Acknowledgments/Other

[Minutes on our website](#)



*There are two things to remember in life
Take care of your thoughts
when you are alone, and take
care of your words when you
are with people.*

This ends another issue of our newsletter, till our paths cross again.