



HEART OF DARKNESS

Can one man help the U.S.'s most densely populated state "see the night?"

Back in 2002, Verizon's "Test Man" character shot to popularity with a series of commercials, where he evaluated the cell phone coverage in various locations by coining the catchphrase, "Can you hear me now?" Decades later, another bespectacled man from Verizon is working on tackling what local communities can see—namely the night sky.

For nearly 42 years, James Webster has been working with the telecommunications giant to support in-house equipment employed at Verizon's test centers, but it was his hobby as a photographer that led him to what he calls his "triad of interests": the Astronomical Society of the Toms River Area (ASTRA), DarkSky New Jersey, and citizen science hub SciStarter.

"I decided to get into photography for something else to do; I was doing Milky Way photography and storm photography, and that led me to ASTRA and getting involved with astronomy," Webster

**By Craig
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recalled. "The biggest problem for Milky Way photography and astronomy is light pollution. So, I started looking things up on the Internet, and it led me to DarkSky International. I eventually joined as an advocate and now I'm a delegate. There's also a program called Globe at Night, which can be found on SciStarter. There was a bunch of other dark-sky programs, astronomy programs, nature programs in there, and light pollution, of course. I found it a good fit between the astronomy, DarkSky, and SciStarter, and that's where I am today."

As the U.S.'s most-densely populated state, New Jersey is not known as a paradise for stargazers. While not on the level of urban centers such as Newark, Elizabeth, and Jersey City—all which rate at or close to the top of the nine-level Bortle scale, which measures the night sky's brightness of a particular location—Webster's Toms River area rates around a 7, with the sky showing significant signs of light pollution. The local beach communities aren't faring much better; with the continued waterfront development and beaming boardwalk attractions, you're more likely to hear a cover of Coldplay's 2014 hit song emanating from a nearby bar than see an actual sky full of stars.

As a volunteer, Webster views educating the public as an essential component of the dark-sky movement. That education comes in many forms and is tailored to varying audiences.

"I like getting in front of the crowds to talk about these subjects," he said. "I started giving presentations [with ASTRA] on a variety of subjects, and now I do it for the public, either for the park system, libraries, or even various government and environmental groups. I will also focus on light pollution if I'm doing something astronomy related or environmental, which brings us into SciStarter topics, where I'll talk about the impact of light pollution on our own health as well as the health of animals that live side-by-side with us—such as its impact on our pollinators. And that's a big impact—that we don't protect our pollinators. We could stand to lose a third of our food production."

Seniors, Teens, and Government Seats

To connect with various ages and populations, Webster participates in a diverse number of events throughout the year, including ASTRA Star Parties—where the club's members share views through their telescopes along with their knowledge of the universe—as well as nature festivals and school fairs. These events often draw

a diverse crowd, and Webster has found that the younger generations tend to have a better grasp on the current dark-sky and environmental concerns than their parents and grandparents.

"A typical example would be my own father; when I'm talking about light pollution, he's like, 'Yeah, yeah,' that's his response," Webster said. "Here in my homeowners association, some get it, but most don't. They want more lights, and I can understand their concerns for it because visual perspectives change as you get older. But they don't realize that if they try driving at night, the brighter lights on the cars blind them. And for us, it takes significantly longer to get our night vision back, which is a big thing with Star Parties—if a white light goes on, you ruin your night vision. For a younger person, they can get that night vision back within about 10 minutes, but it could take almost a half-hour for it to come back [for seniors]. Previous generations never really gave it a concern; they didn't realize the damage that was going on."

While educating the public is a perpetual process, Webster cites his biggest challenge as getting government officials involved with dark-sky preservation. DarkSky New Jersey members help by guiding local and state officials in the right direction by providing educational material and resources featuring effective luminaires, and some towns and boroughs are beginning to take action. Clinton, Hopewell Borough, Teaneck, the Great Swamp National Wildlife Refuge area, and Princeton have all expressed an interest in Webster's work, and the historic town of Cape May is now looking to decrease light pollution while maintaining its Victorian-era aesthetics.

Webster cited a model developed by local environmental group Save Barnegat Bay, which he views as a potential motivational tool for towns. The group protects the Barnegat Bay watershed, and it utilizes a grading system for the different towns around the area. As more towns participate in DarkSky efforts, Webster would like to develop a grading system to prompt towns to take notice of their performance and shoot for "A-level" results.

"There are—and I would say it's not just the New York/New Jersey area, even in Pennsylvania as well—a lot of educational and engineering challenges," admitted Webster. "The best example of a city picking up the challenge would be Pittsburgh. The entire city now has an ordinance that's going into place to recover the night. Another success story would be Coudersport, Pennsylvania, and some of the other outlying towns to Cherry Springs



Photos: James Webster

Top: Webster provides a wealth of information on his "triad of interests": ASTRA, DarkSky, and SciStarter.

Bottom: The Cattus Island Nature Festival in Toms River, NJ, is just one of the local parks where Webster has found an audience.

State Park, which became one of the very first certified DarkSky locations. That would not have happened without those towns participating and getting involved. They're good examples for us here of what can be done. It's just that we must have people willing to do it."

Parks and Recreation

New Jersey State Parks include more than 452,000 acres of land comprising parks, forests, historic sites, and other recreation areas that attract nearly 17 million visitors per year. Island Beach State Park, a narrow, 10-mile-long barrier island resting between the Atlantic Ocean and Barnegat Bay in Ocean County, is a popular site for both summertime beachgoers and year-round fishing, as well as a local photography site for Webster. Island Beach State Park recently changed its lighting for all vehicle air refill stations



Photo: James Webster



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Top: Among the views Webster has captured are those at Tupper Lake, NY.

Left: Participants set up telescopes during a recent Star Party event at Jakes Branch County Park.

and Webster reports that the park's Environmental Center is interested in doing more. Light pollution exhibits at both the Great Swamp National Wildlife Refuge in northern New Jersey and Jakes Branch County Park in Beachwood have received a positive reception from the public, with Jakes Branch currently considering a move to fully shielded luminaires that will also aid in ASTRA's astronomy events at the site.

With each small step forward, there is another challenge seemingly right around the corner. "A site for improvement would be by the Barnegat Bay Lighthouse," admitted Webster. "You can get really good Milky Way photography with the lighthouse behind you, but during the tourist season, the lights start getting really bright and wash things

out. Good locations to view the Milky Way include Tupper Lake in New York. The Adirondack Sky Center is looking to work with DarkSky to get their town certified now, and I've done Milky Way photography there. [Other] examples would be Sanibel and Captiva islands down in Florida, which are dark-sky protected because of the turtle nesting down there. They have an ordinance where there's no extraneous lights after night. At 9 p.m., everything has to be a red or amber light."

A Passion for Protection

In the end, there's only so much time in a day for someone who works full time and dedicates a significant amount of his leisure time as a volunteer for three organizations. But Webster is undeterred and has his eyes on a prize.

"Best case scenario for me right now would be Island Beach State Park and Jakes Branch County Park both becoming urban DarkSky-certified locations," Webster said. "You know, we'll still have the problem with some light pollution, but those two hubs will be practicing light pollution protection, and then eventually the outlying areas will see this and start getting more interest and involvement. A good model for that right now is Hopewell Borough because they're going for certification, and the train of thought is if they do it, we hope the outer areas will start doing it as well. Then, slowly, we can start getting some of the dark skies back." ©